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Office Consolidation

October 2001

Southeast Industrial

Area Structure Plan and Supporting Information

THE CITY OF CALGARY
LAND USE AND MOBILITY
PLANNING AND TRANSPORTATION POLICY

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NOTE: This Office Consolidation includes the following amending Bylaws:

AMENDMENT	BYLAW	DATE	DESCRIPTION
1	30P97	October 6, 1997	Map 2 (Superceded by 34P97, 13P98, 15P98, 25P98, 27P98, 16P2000, 8P2001)
2	34P97	January 19, 1998	Map 2 (Superseded by 13P98, 15P98, 25P98, 27P98, 16P2000, 8P2001)
3	13P98	June 15, 1998	Map 2 (Superseded by 15P98, 25P98, 27P98, 16P2000, 8P2001)
4	15P98	July 21, 1998	Map 2 (Superseded by 25P98, 27P98, 16P2000, 8P2001)
5	23P98	September 15, 1998	Section 4.6 add policies b and c
6	25P98	December 6, 1999	a. Delete Section 4.1.5
			b. Map 2 (Superseded by 27P98, 16P2000, 8P2001) Map 3 - 10
7	27P98	1998 October 5	Map 2 (Superceded by 16P2000, 8P2001)
8	1P99	1999 February 08	Replace paragraphs 4 and 5 of Section 4.6
9	4P2000	2000 February 14	a. Replace paragraphs 5 of Section 4.6 text
			b. Add d, e, f, g to Recommendations in Section 4.6
10	12P2000	2000 September 28	a. Replace Recommendatins a and b in Section 4.2
11	16P2000	2000 June 26	Map 2 (Superceded by 8P2001)
12	8P2001	2001 June 18	a. Maps 1 - 10
			b. Section 2.0
			c. Delete Section 4.1.5

Amended portions of the text are printed in italics and the specific amending Bylaw is noted.
Persons making use of this consolidation are reminded that it has no legislative sanction, and that amendments have been embodied for ease of reference only. The official Bylaw and all amendments thereto are available from the City Clerk and should be consulted when interpreting and applying this Bylaw.

PUBLISHING INFORMATION

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STATUS:	APPROVED BY CITY COUNCIL, 1996 MARCH 11, BYLAW 6P96
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SOUTHEAST INDUSTRIAL AREA STRUCTURE PLAN

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PREFACE

This **Area Structure Plan** replaces the **Southeast Policy Report** approved by City Council on 1980 April 15.

The **Southeast Industrial Area Structure Plan and Supporting Information** is a planning document prepared for adoption by City Council pursuant to the planning provisions of the **Municipal Government Act**. The document is in two parts: the first is the **Area Structure Plan** (white pages) to be adopted by City Council by bylaw. The second part is the **Supporting Information** (blue pages), which provides background to the plan recommendations.

Demand for industrial land in the Southeast Industrial Area is expected to remain high from 1995 to 2000 and beyond. With rail servicing becoming more important to many large users, demand for industrial land in the study area will remain strong, particularly given that the area contains the only significant supply of rail serviced land in the city.

Crucial to the maintenance of an ongoing supply of serviced industrial land in the southeast is the preparation and implementation of a comprehensive servicing plan for the area, particularly for storm and sanitary sewer services. High priority must be given to doing this if a serious shortage in the availability of serviced industrial land is to be avoided.

Southeast Industrial Area Structure Plan

1.0 PURPOSE

The purpose of the Area Structure Plan is to define a land use concept for the Southeast Industrial Area, and to provide for a range of industrial uses.

This Plan is aimed at identifying appropriate locations for various types of industrial uses in the study area in a manner that minimizes any adverse impact on adjacent residential communities. Additionally, the Plan sets out transportation and utility infrastructure systems necessary for the orderly development of the area. Suitable provisions are made for active/passive recreational activities within the study area in coordination with the adjacent residential communities and Calgary's regional open space system.

2.0 STUDY AREA (Map 1)

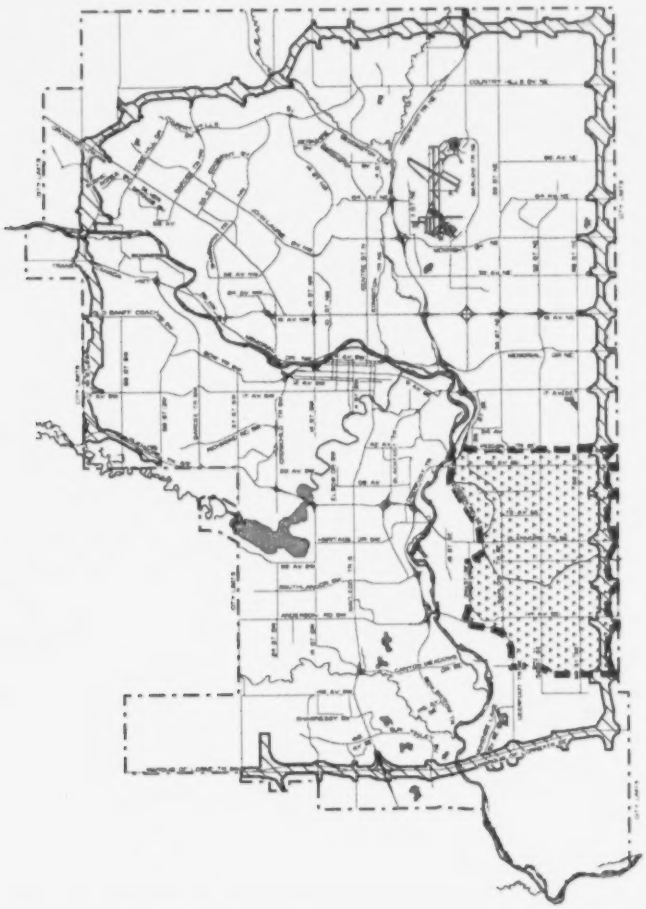
The Southeast Industrial Area is located in the southeast part of the city south of Peigan Trail Freeway/ Expressway (43 Avenue S.E.), east of the existing residential communities of Odgen, Riverbend, Douglasdale and north of McKenzie Towne. *The easterly boundary of the study area is the eastern edge of the Transportation/Utility Corridor* **(8P2001)**.

This Area Structure Plan covers a total area of approximately 5,200 hectares (12,850 acres), excluding the Transportation/Utility Corridor (TUC) and the Western Headworks Canal right-of-way.

SPECIAL NOTE:

This Plan contains many proposals related to the extension of utility systems, open space provision, pathways/ bikeways and other municipal services. It is important to note in this regard that the Area Structure Plan does not commit The City to provide these services and facilities at any particular point in time. These decisions will be made through the annual capital budget process. However, as stated in Section 4.1.1, major municipal services are required as a matter of priority to meet the demand for serviced industrial land in the Southeast Industrial Area.

It is also important to note that no recommendation in the Southeast Industrial Area Structure Plan shall be construed as committing City Council to assist in the relocation of existing industrial development adjacent to the surrounding residential areas. The policies of Area Structure Plans, Policy Reports and Design Briefs (i.e., Eastfield Area Structure Plan, Riverbend Area Structure Plan, Barlow Area Structure Plan, Southeast Policy Report, East McKenzie Area Structure Plan, Dover Design Brief and Ogden Design Brief) establishing residential communities adjacent to the Southeast Industrial Area have recognized the ongoing operation of different types of industrial uses adjacent to these communities.



Southeast Industrial

Map No. 1

Title

Study Area Location

Legend

Area Structure Plan area

Transportation / Utility Corridor

Amended 8P2001 2001 June
Approved 1996 March

THE CITY OF CALGARY
PLANNING & BUILDING DEPARTMENT

3.0 THE PLAN (Map 2)

The Southeast Industrial Area Structure Plan (ASP) provides for the orderly development of light, heavy and limited-serviced industrial uses in a manner that is responsive to the dynamic nature of this sector of Calgary's economy. In this regard, the Plan allocates approximately 1,439 hectares (3,557 acres) for I-2 General Light Industrial, 107 hectares (264 acres) for I-3 Heavy Industrial and 541 hectares (1,336 acres) for general future industrial development (including I-4 Limited-Serviced Industrial uses) to meet long-term requirements for industrial and related uses. These areas, in addition to the existing development, should provide sufficient lands in this part of the city to accommodate industrial development for the next fifteen to twenty years.

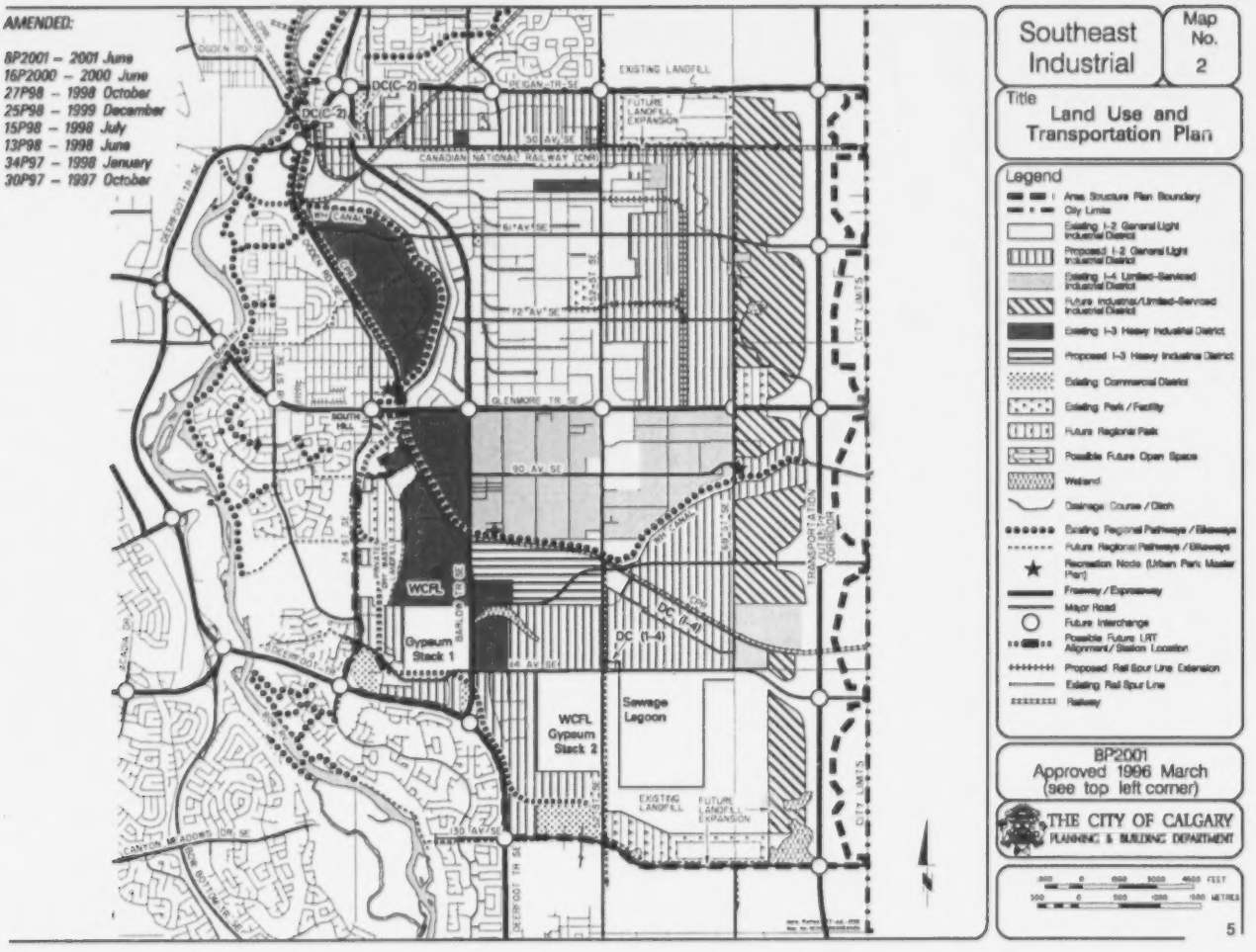
The Plan calls for an overall comprehensive utility plan (e.g., utilities, roads, rail services, etc.) so that demand for serviced industrial land can be met in an economical manner and in a manner that is responsive to changing market conditions.

As residential communities have been established to the north, west and south of the study area, the Plan recommends that high quality light industrial uses be located in areas that interface with these communities and that such uses be developed in a sensitive manner, particularly along the plan boundaries. The Plan also includes provisions for a range of policies (e.g., environmental matters, development setbacks/ landscaping requirements, performance standards, etc.) to ensure that industrial development occurs in an appropriate manner.

Finally, the Southeast Industrial Area Structure Plan provides an opportunity to deal with a number of other vital issues relative to southeast Calgary, including:

- protection and enhancement of the Western Headworks Canal, not only as an important irrigation facility, but also as a significant component of Calgary's open space system (e.g., coordination of the canal pathways/bikeways with the Bow River valley open space system, provision for recreation nodes along the canal);
- appropriate land use policies in relation to the fundamental changes to the Western Co-operative Fertilizers Limited's fertilizer complex. These fertilizer production facilities have been shut down and mothballed (for more information refer to Section 7.4.3 in the **Supporting Information**);
- land use protection for the two major landfill operations and the sewage lagoon facility located in this part of Calgary;
- provision for regional parks and bikeways/ pathways;
- protection of a corridor for the long-term extension of the Light Rail Transit (LRT) system.

Primary access to the study area will be via Peigan Trail, Glenmore Trail, Barlow Trail, 52 Street, Deerfoot Trail S.E. and the future East Freeway (Transportation/Utility Corridor).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27P98 – 1998 October
25P98 – 1999 December
15P98 – 1998 July
13P98 – 1998 June
34P97 – 1998 January
30P97 – 1997 October
Southeast Industrial
Map No. 2
Title
Land Use and Transportation Plan
Legend
Area Structure Plan Boundary
City Limits
Existing I-2 General Light Industrial District
Proposed I-2 General Light Industrial District
Existing I-4 Limited-Serviced Industrial District
Future Industrial/Limited-Serviced Industrial District
Existing I-3 Heavy Industrial District
Proposed I-3 Heavy Industrial District
Existing Commercial District
Existing Park / Facility
Future Regional Park
Possible Future Open Space
Wetland
Drainage Course / Ditch
Existing Regional Pathways / Bikeways
Future Regional Pathways / Bikeways
Recreation Node (Urban Park Master Plan)
Freeway / Expressway
Major Road
Future Interchange
Possible Future LRT Alignment / Station Location
Proposed Rail Spur Line Extension
Existing Rail Spur Line
Railway
BP2001
Approved 1996 March
(see top left corner)
THE CITY OF CALGARY
PLANNING & BUILDING DEPARTMENT
EXISTING LANDFILL
FUTURE LANDFILL EXPANSION
DCIC-21
OGDEN RD SE
DEERFOOT TR SE
CANADIAN NATIONAL RAILWAY (CNR)
84 AV SE
72 AV SE
GLENMORE TR SE
90 AV SE
80 AV SE
50 AV SE
CANYON MEADOWS DR SE
SOUTH HILL
WCFL
Gypsum Stack 1
WCFL Gypsum Stack 2
Sewage Lagoon
DC (I-4)
TRANSPORTATION UTILITY CORRIDOR
CITY LIMITS
5

4.0 PLANNING POLICIES

4.1 Industrial Development

4.1.1 General

Ensuring that a supply of serviced land is available to meet Calgary's future industrial needs is an important component of The City's Corporate Business Plan (1996/99). In particular, the Plan states that *"During the upcoming business cycle, the Commissioners will continue to actively support the sale and development of industrial land and the provision of strategic infrastructure improvements needed to facilitate these developments."* At the present time, the lack of serviced land in the Southeast Industrial Area is a serious issue. A rapid pace of development in the area, which has not been accompanied by a servicing program geared to making additional lands available for development, has led to a shortfall of serviced industrial land which, if not rectified, could jeopardize Calgary's economic development incentives. As is the case in residential growth corridors, it is important that The City ensure that services are available to accommodate future industrial development.

In order to meet demand for serviced industrial land the extension of major municipal services (i.e., water, storm and sanitary sewers) are required in the study area. It is vital that these services be provided in a timely manner if an ongoing supply of land for future industrial development is to be maintained in the southeast. While servicing solutions for each utility and the overall roadway network have been determined (see Section 4.4 Transportation and Section 4.5 Utility Services), decisions are required with respect to the overall coordination of this infrastructure, particularly in terms of what areas should be serviced first. In addition, a financial commitment to undertake the programs required is necessary. It is essential that these issues be addressed as a matter of priority and that a report be brought to City Council in this regard in time for consideration as part of the 1997 capital budget process.

Based on the **Southeast Policy Report**, the Southeast Industrial Area has accommodated I-2 General Light Industrial, I-3 heavy Industrial and I-4 Limited-Serviced Industrial uses. Given that the entire study area is not fully serviced, some I-4 Limited-Service Industrial development has been accommodated in the absence of key municipal services such as water and sanitary/storm sewers (e.g., in Sections 22 and 23-23-29W4). However, serious problems have resulted in these areas in terms of poor access roads and the lack of satisfactory storm drainage (see Section 4.1.4).

Apart from two mobile home parks and four residential dwellings in the South Hill area, which are due to be phased out over time, no residential uses are proposed within the Plan area. As a result, proposals for any additional residential development would be contrary to this Plan.

Recommendation:

(a) That a comprehensive servicing program be prepared as a matter of priority for the Southeast Industrial Area and presented to Council through the 1997 capital budget process so as to ensure an ongoing healthy supply of serviced industrial land in this area.

4.1.2 General Light Industrial

The purpose of the general light industrial area is to provide for a range of light industrial and associated uses that are compatible with each other and do not adversely affect surrounding non-industrial uses. In this regard, high quality light industrial uses will be provided within the study area, particularly along the boundary roadways that separate the area from adjacent residential communities. Such a measure will enhance the existing character of the study area.

Development trends indicate that there is a high demand for large parcels to accommodate light industrial development requiring rail services. The light industrial uses will be consistent with those which are allowed in the I-2 General Light Industrial District under the **Calgary Land Use Bylaw 2P80**. In response to the present demand for light industrial development, the Plan (Map 2) identifies appropriate lands for future general light industrial uses. Land uses other than I-2 General Light Industrial that are consistent with the overall intent of the I-2 District will also be allowed in this area.

Recommendations:

(a) That general light industrial development in the Southeast Industrial Area be in accordance with the I-2 General Light Industrial District rules included in the ***Calgary Land Use Bylaw 2P80.***

(b) That the following additional requirements apply to the General Light Industrial areas:

(i) development in areas adjacent to residential communities shall be visually attractive and compatible with the adjacent residential development, particularly along the south side of Peigan Trail S.E., directly east of 24 Street S.E., immediately north and east of Deerfoot Trail S.E. and along the north side of 130 Avenue S.E. (e.g., the design, character and appearance of buildings shall be compatible with the adjacent area and the buildings shall be constructed of durable materials to maintain the initial quality throughout the life of the development project); and

(ii) future light industrial development along the south side of Peigan Trail and along the north and east sides of the Deerfoot Trail S.E. should have frontages onto service roads located next to these roadways or provide for other alternative options such as high quality fencing, berming, planting, attractive building design, landscaped buffer zones, etc.

4.1.3 Heavy Industrial

The heavy industrial area will provide for manufacturing, fabricating, processing and assembling activities, including large scale operations whose external effects are likely to be felt to some extent by surrounding development.

Because of an abundant supply of raw water and good rail access, the Southeast Industrial Area has advantages for heavy industry. However, development trends currently indicate only a limited demand for heavy industrial uses within the city. Accordingly, some land needs to be retained for future heavy industrial development, particularly east of the Western Co-operative Fertilizers Limited (WCFL) property where utility services may be readily available, including good access to rail and major roads. Land uses other than I-3 Heavy Industrial (i.e., I-2 General Light Industrial) can also be accommodated in this area.

Recommendation:

(a) That heavy industrial development within the Southeast Industrial Area be in compliance with the I-3 Heavy Industrial District rules contained in the ***Calgary Land Use Bylaw 2P80****.*

4.1.4 Future Industrial/Limited-Serviced Industrial

The area lying generally between 68 Street SE and the Transportation and Utility Corridor shown on Map 2 as Future Industrial/Limited-Serviced Industrial is intended to accommodate a variety of future industrial uses including both I-2 and I-4 type development. Applications to redesignate, subdivide and develop lands in this area will be judged on their individual merits in accordance with the policies of this Plan and other factors considered appropriate by the Approving Authority. Limited-Serviced Industrial (I-4) development may take place in this area and the balance of the section sets out information and policies which should be taken into consideration when planning applications for this type of development are evaluated.

The limited-serviced industrial areas are intended to accommodate uses requiring large parcels of land with minimal servicing requirements. Land uses are characterized by the need for outside storage or outside processing, limited building area, generation of low traffic volumes and no significant water or sanitary sewer needs.

Development trends indicate an increasing demand for limited-serviced industrial land within the city. It is recommended that appropriate lands be set aside for limited-serviced industrial uses, particularly east of 68 Street S.E. north and south of the Western Headworks Canal where major services are not likely to be available for many years (Map 2). However, it must be emphasized that problems relative to poor storm drainage and the lack of paved access roads, similar to the problems which occurred in Sections 22 and 23-23-29 W4 north of the Western Headworks Canal should be avoided. (Insofar as Section 22 is concerned, Local Improvement Bylaws have been adopted which will see City water extended to this area in 1995 and paved roads construction in 1996. It is anticipated that similar improvements will be completed in Section 23 in subsequent years). In order to avoid the foregoing problems, a minimum lot size is required to accommodate satisfactory on-site stormwater control measures. Furthermore, the total net floor area for all buildings on a minimum size lot must not exceed the maximum allowed under the **Calgary Land Use Bylaw 2P80** (i.e., 1,600 square metres). This measure will ensure that sufficient outdoor space is retained for stormwater control measures. It is also important to note that, since City piped water services are not available to these areas, normal fire protection services will not be available.

As and when the limited-serviced industrial areas are fully serviced, they can be redesignated to I-2 General Light Industrial District upon receipt of applications submitted by the landowners/developers affected.

Given the nature of limited-serviced industrial uses and, in particular, their visual impact, it is important that attention be paid to the appearance of any proposed development where it abuts the East Freeway and other major roadways. For the most part, this is also where limited-serviced industrial development lies adjacent to the General Light Industrial areas as shown on Map 2. In addition, it is recommended that no expansion of limited-serviced industrial development areas be permitted adjacent to the Western Headworks Canal and that particular attention be paid to developments proposed along the Canal in Sections 22 and 23. Mitigating any potential negative impact is important in these areas. In addition, there is an ongoing concern over the potential contaminated storm runoff entering the Canal given the absence of a storm sewer system.

Recommendations:

*(a) That limited-serviced industrial development within the Southeast Industrial Area be subject to the I-4 Limited-Serviced Industrial District rules included in the **Calgary Land Use Bylaw 2P80**, and subject to the following:*

(i) a minimum lot size of 1.6 hectares (4 acres);

(ii) on-site stormwater control measures shall be provided by the developer to the satisfaction of the Engineering & Environmental Services Department;

(iii) the total net floor area for all buildings located on a site must not exceed 1,600 square metres (17,223 square feet±); a land use amendment to I-2 or other appropriate designation shall be required where the size of buildings exceeds this limit;

(iv) a Deferred Services Agreement shall be signed by landowners/developers;

(v) until such time as services are available, it be clearly understood that urban standard fire-protection services will not be available;

(vi) any development adjacent to the East Freeway must provide a 50 metre wide landscaped buffer along the west edge of the Transportation/Utility Corridor including suitable berming and/or planting to effectively screen the development from the Freeway;

(vii) the Development Officer shall insure that any limited-serviced industrial development that abuts a major roadway or freeway/expressway is compatible with the overall standard of development for General Light Industrial Development in similar locations in the Southeast Industrial Area, particularly in terms of landscaping, building design and screening of storage areas; and

(viii) in addition to the setbacks specified in Section 4.3, development, adjacent to the Western Headworks Canal in Sections 22 and 23 shall include provisions to ensure that any unsightly storage areas, etc. are screened and that overland storm runoff to the Canal is controlled.

4.1.5 South Hill Area

Section deleted **25P98**.

4.1.6 Lands East of the Transportation/Utility Corridor

Section deleted **8P2001**.

4.2 Commercial

Generally, major retail commercial facilities have resulted in problems for both industrial areas and for adjacent residential communities in terms of land use compatibility, pedestrian movements, vehicular traffic congestion and road capacity. In view of this, recent amendments were made to the **Calgary Land Use Bylaw 2P80** to ensure that commercial development of an intensity not appropriate to industrial areas is not permitted. That is not to say, however, that all forms of commercial development are inappropriate in industrial areas. This Plan recognizes the need for commercial development in the Southeast Industrial Area, particularly to support the needs of the industrial employees. More intensive commercial development should only be allowed where it can be clearly

demonstrated that such development will not undermine the overall intent of the industrial policies for this area and that the road system and utility services are capable of accommodating such development.

Recommendations:

(a) That local commercial facilities be allowed in the Southeast Industrial area to primarily cater to the needs of the industrial area employees. Commercial uses should generally be consistent with the provisions of the General Light Industrial District (I-2). Applications for land use amendments to accommodate additional commercial development beyond that allowed under I-2 will be considered for sites up to 1.6 hectares (4 acres) in size provided that the application:

- *demonstrates how the proposed commercial development will meet the needs of industrial employees in the area and how the proposal does not rely on patronage from beyond the industrial area;*
- *identifies the amount and type of commercial development both in the immediate and surrounding areas, and addresses the cumulative effect of commercial activities on the predominance of industrial land uses; and*
- *demonstrates that the yards and landscaped area are consistent with the adjacent industrial context.* ***12P2000***

(b) That applications for land use amendments to accommodate additional commercial development beyond that allowed under the General Light Industrial District (I-2), on sites greater than 1.6 hectares (4 acres) in size to accommodate commercial development may be considered, provided:

- *the impact of the commercial development on the serviced or serviceable industrial land supply is assessed and found not to have a significant negative effect;*
- *the impact of the proposed commercial development on the existing and planned commercial developments in the surrounding areas and adjacent communities is assessed and found not to have a significant negative impact;*
- *the impact of commercial - oriented traffic from outside the area on the intended industrial road network standards is assessed and found to be acceptable with respect to the following:*
  - *the cumulative impact of commercial development shall not create significant negative effect on adjacent roads or roads in the vicinity;*

- *access and egress for site-specific commercial proposals shall not negatively affect or hinder both the functioning of the road system or industrial-oriented traffic; and*

- *transportation infrastructure improvements required in the area as a result of a specific commercial proposal shall be the responsibility of the developer of that commercial proposal only.*

- *the impact of commercial uses on adjacent industrial uses will not hinder or destabilize the continued industrial uses of the adjacent site, or hinder the location of future industrial uses in the area;*

- *the application demonstrates how the proposed commercial development will meet the needs of industrial employees in the area, and that commercial uses within the plan area are considered to be secondary and complementary to industrial development; and*

- *an amendment to this plan is approved identifying the commercial site and specifying any site specific development requirements.* ***12P2000***

(c) This plan acknowledges the existence of the Douglasdale Centre at the intersection of 24 Street and Deerfoot Trail.

4.3 Regional Open Space

All existing and proposed parks in the Southeast Industrial Area are located on City-owned land. Any additional regional open space required should be achieved through municipal reserve land dedication or, where necessary, negotiation with land owners. It is emphasized that the proposed regional parks and other possible future open spaces, shown on Map 2, are subject to a joint review by the Solid Waste Division of the Engineering & Environmental Services Department and Calgary Parks & Recreation.

The regional open space will accommodate active and passive recreational uses through the provision of regional parks, multi-use recreational pathways and playgrounds. It will provide opportunities for diverse year-round recreational experiences (e.g., walking, jogging, bike-riding, cross-country skiing, etc.). Where possible, existing significant natural features should be protected.

An excellent opportunity exists in the Southeast Industrial Area for the development of a regional parkway system integrated with the Western Headworks (W.H.) Canal and the Bow River valley open space to the west. The W.H. Canal provides an important link to Chestermere Lake and a necessary extension of the regional pathway system. It will serve

industrial employees, communities adjacent to the study area and overall City needs. The Canal is a major physical feature in the study area providing an aesthetically pleasant environment. Its right-of-way has been recently rehabilitated by Alberta Environmental Protection. The canal right-of-way in its present significantly improved condition must be protected and enhanced, where possible, by providing suitable development setbacks and landscaping adjacent to it.

Recommendations:

(a) That the proposed Southeast Industrial Area regional open space system, shown on Map 2, be approved in principle.

(b) That Calgary Parks & Recreation prepare regional park development plans for the study area in consultation with the communities adjacent to the Southeast Industrial Area.

(c) That, where feasible, regional park development plans for the Southeast Industrial Area be integrated with the natural features existing in the area.

(d) That the regional pathways in the Southeast Industrial Area be linked to the regional pathways along the Bow River via the adjacent residential communities.

(e) That land for regional athletic parks be established, as shown on Map 2.

(f) That, where necessary, municipal reserve land resulting from subdivision of land in the Southeast Industrial Area be utilized to implement the regional open space system proposed.

(g) That all industrial development along the Western Headworks Canal provide a building setback of 15 metres (50 feet) from the Canal right-of-way, and that 7.5 metres (25 feet) of the setback area must be landscaped by landowners/developers (e.g., planting and/or berming) to the satisfaction of the approving authority.

(h) That outline plans for areas abutting the Western Headworks Canal ensure that adequate provisions are made for focal points along the canal such as picnic areas, canoe launching pads, pedestrian and cycle paths.

(i) A pathway connection from the Douglasdale Centre, east along 114 Avenue (or 106 Avenue) to the 52 Street proposed pathway, be investigated.

4.4 Transportation

4.4.1 Railway Network

Both Canadian National Railway (CNR) and Canadian Pacific Ltd. (CP) have trackage through the Southeast Industrial Area, which has influenced land use planning and development (Map 2). The CNR main line runs south of 50 Avenue S.E. and splits into the Three Hills line, which runs northeast, the main line which runs west across the Bow River through the Highfield Industrial area, and a short spurline which crosses the river into Inglewood. The CNR Sarcee Yards are located south of 50 Avenue S.E. between Barlow Trail and 52 Street S.E. The CP main line crosses the Bow River and enters the northwest corner of the study area. The main line parallels Ogden Road, and then follows the Western Headworks Canal to 52 Street S.E. Then it continues southeast out of the city towards Medicine Hat. The CP Ogden Shops and Yards occupy a large portion of the heavy industrial area bounded by Ogden Road and the Western Headworks Canal.

In 1961 the City of Calgary entered into a 20 year agreement with Canadian National Railways (CNR) and Canadian Pacific Limited (CP) designed to accommodate industrial development with rail access in an area roughly 4,800 hectares (12,000 acres) which extended to the east of the present city limits. In 1981 the Agreement was renegotiated (for further information see Section 6.4 in the **Supporting Information**). The agreement provides for joint rail service to this industrial area which results in elimination of inter-switching fees which otherwise would be charged by the railways. This agreement only applies to the area between 50 Avenue S.E. and Glenmore Trail as shown on Map 15.

The proposed rail spur line extensions shown on Map 2 will serve future industrial development occurring within the Tri-Party Agreement area. The spurline extensions are conceptual only and may be extended or modified at the outline plan stage without the need for amendment to this Plan.

In preparing and reviewing outline plans and development applications it is important to emphasize that the Transportation Department will require all future development to provide sightlines at all level railway crossings.

4.4.2 Road Network

4.4.2.1 Regional Road Network (Map 3)

The regional road network serving the Southeast Industrial Area as shown on Map 3, provides the area with access to all parts of the city, as well as areas outside the city. This network includes Peigan Trail, Glenmore Trail, Marquis-of-Lorne Trail (Highway 22x), Barlow Trail, Deerfoot Trail, and the future East Freeway. All of these roads, with the exception of Marquis-of-Lorne-Trail, also form part of the study area's internal road network. Marquis-of-Lorne-Trail is an east-west road within the TUC. It will have interchanges at Deerfoot Trail, 52 Street S.E. and the future East Freeway. The East Freeway will ultimately provide access to the study area from the north and south, although the Province has made no firm commitment regarding the timing of construction. The freeway will be located within the Transportation/ Utility Corridor with interchanges proposed at Peigan Trail, 61 Avenue, Glenmore Trail, 106 Avenue, 114 Avenue, and 130 Avenue S.E. Damage to the existing Shepard Wetlands must be minimized when the East Freeway is constructed.

The transportation network in the study area shall be developed in accordance with the **Calgary Transportation Plan** and the associated **Transportation System Bylaw 41M95**. In addition, access to all roads in the study area is governed by the **Controlled Streets Bylaw 12M80**.

The overall road network, as shown on Maps 2 and 3, is conceptual only and may be adjusted at the outline plan stage without the need to amend this Plan.

The staging of the construction of roads in the Southeast Industrial Area will be determined through the comprehensive servicing program referred to in Section 4.1.1 and through the **Transportation Improvements Priority Study** (T.I.P.S.) process. It is important, in this regard, that the T.I.P.S. review process specifically acknowledge the need for road improvements in industrial areas as well as in residential growth corridors.

Recommendations:

*(a) That the **Transportation Improvements Priority Study** make specific provision for the roadway improvements required to facilitate development in the Southeast Industrial Area.*

*(b) That, as development takes place, land required for future interchanges, widening and realignment of roads within the Southeast Industrial Area shall be protected in accordance with the recommendations of the **Calgary Transportation Plan**.*

(c) That, where necessary, appropriate road widening or other measures shall be undertaken by the Engineering & Environmental Services Department and the Transportation Department to improve traffic flows in the study area.

Southeast Industrial	Map No. 3

Title
Regional Road Network

Legend

- Area Structure Plan Boundary
- Interchange
- Major Road
- Light Rail Transit Alignment
- Freeway or Expressway
- Transportation / Utility Corridor

Source: Transportation System Bylaw 49P95

Amended 8P2001 2001 June
Amended 25P98 1999 December
Approved 1996 March

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4.4.2.2 Internal Major Road Network

(a) Peigan Trail S.E.

Peigan Trail (formerly known as 43 Avenue Freeway), currently extends from Deerfoot Trail to 52 Street S.E. Eventually, Peigan Trail will be extended east across the Transportation/Utility Corridor beyond the current city limits.

(b) 50 Avenue S.E.

50 Avenue S.E. is classified as a major road between Ogden Road and 52 Street S.E. This road will be discontinued east of 52 Street and will provide access to the development directly north and south of it. 50 Avenue east of 52 Street S.E. will be retained as a local road.

(c) Glenmore Trail

Glenmore Trail S.E. is designated as an expressway/freeway, providing access to the study area from the east and west. The road is currently four lane, divided between 24 Street and Barlow Trail S.E., Glenmore Trail S.E. extends east across the Transportation/Utility Corridor and beyond 84 Street S.E., the present city limits. The approved **Glenmore Trail East Right-of-way Study (CALTS 77)** provides for a future fully grade separated Glenmore Trail S.E. However, Glenmore Trail S.E. needs to be improved to accommodate heavy vehicular traffic on a priority basis.

(d) Deerfoot Trail S.E.

Deerfoot Trail, east of the Bow River, is presently constructed as a four-lane divided expressway with traffic lights at the intersections with Douglasdale Boulevard, Barlow Trail and McKenzie Lake Boulevard. When Council approved the **Deerfoot Trail Functional Planning Report**, 1978, approval was given for an ultimate six lane divided freeway from 151 Avenue S.E. to the Bow River. Interchanges will ultimately be built on Deerfoot Trail at the intersections currently served by traffic lights; the future 24 Street S.E. will connect to the current Deerfoot Trail - Douglasdale Boulevard intersection, and the future 130 Avenue S.E. will connect to the current Deerfoot Trail - McKenzie Lake Boulevard intersection.

(e) 130 Avenue S.E.

The 130 Avenue S.E. alignment defines the southerly boundary of the study area, and separates it from the future southerly residential

community of McKenzie Towne. From an approved interchange location on Deerfoot Trail, it straddles the old 130 Avenue S.E. alignment until it connects with the proposed East Freeway to the east. 130 Avenue will function as an east-west major road.

In addition to the above east-west roadways, the future 61 Avenue, 106 Avenue, and 114 Avenue S.E. will eventually provide access to the study area.

(f) Barlow Trail S.E.

Barlow Trail is classified as an expressway/ freeway, but it has not been upgraded to a freeway standard south of Glenmore Trail. This road presently facilitates access to the Southeast Industrial Area from the north and south.

(g) 36 Street S.E.

36 Street will be extended south of Peigan Trail and terminated in a three-way intersection at 50 Avenue S.E. This major roadway will accommodate the north-south traffic between the study area and adjacent areas to the north.

(h) 52 Street S.E.

The centrally located 52 Street currently provides access to the study area from the north and south via Peigan Trail and Highway 22X, respectively. This road is designated as a major road, and it will be widened in the future.

(i) 68 Street S.E.

68 Street is currently a rural road providing access to the easterly parts of the study area from the north and south. This road is classified as a major road between 50 Avenue and 114 Avenue S.E. North of 50 Avenue and south of 114 Avenue S.E., 68 Street will be discontinued to facilitate the proposed easterly expansion and consolidation of the East Calgary Landfill and the Shepard Landfill sites with the lands to the east. However, 68 Street S.E. should remain open until after the construction of an alternative road is completed.

4.4.2.3 Dangerous Goods and Truck Routes (Map 4)

The movement of dangerous goods is controlled by the **Transportation of Dangerous Goods Act**. The dangerous goods routes are part of the truck route system and include Deerfoot Trail, Barlow Trail, Glenmore Trail, 50 Avenue S.E. between Barlow Trail and 52 Street S.E., 52 Street north from Glenmore Trail, Ogden Dale Road between 61 Avenue S.E. and Ogden Road and 61 Avenue S.E. between Barlow Trail and Ogden Dale Road S.E.

The City of Calgary has designated certain roads or areas for use by trucks and has also put certain restrictions on trucks. Under the **City of Calgary Truck Routes Bylaw**, most of the study area is part of an unrestricted truck zone (except the area north of 50 Avenue - Valleyfield or Golden Triangle) and west of the CNR Three Hills line to the Bow River.

4.4.3 Public Transit Services

4.4.3.1 Light Rail Transit (LRT)

A review of existing and future capacity of the South Light Rail Transit line in 1983 concluded that, given the potential for future urban growth in the south and southeast sectors of Calgary, a Southeast Light Rail Transit (LRT) line will eventually be required. The East McKenzie ASP establishes an LRT alignment in the land use plan to allow for the protection of a 15 metre right-of-way at the time of subdivision plan approval.

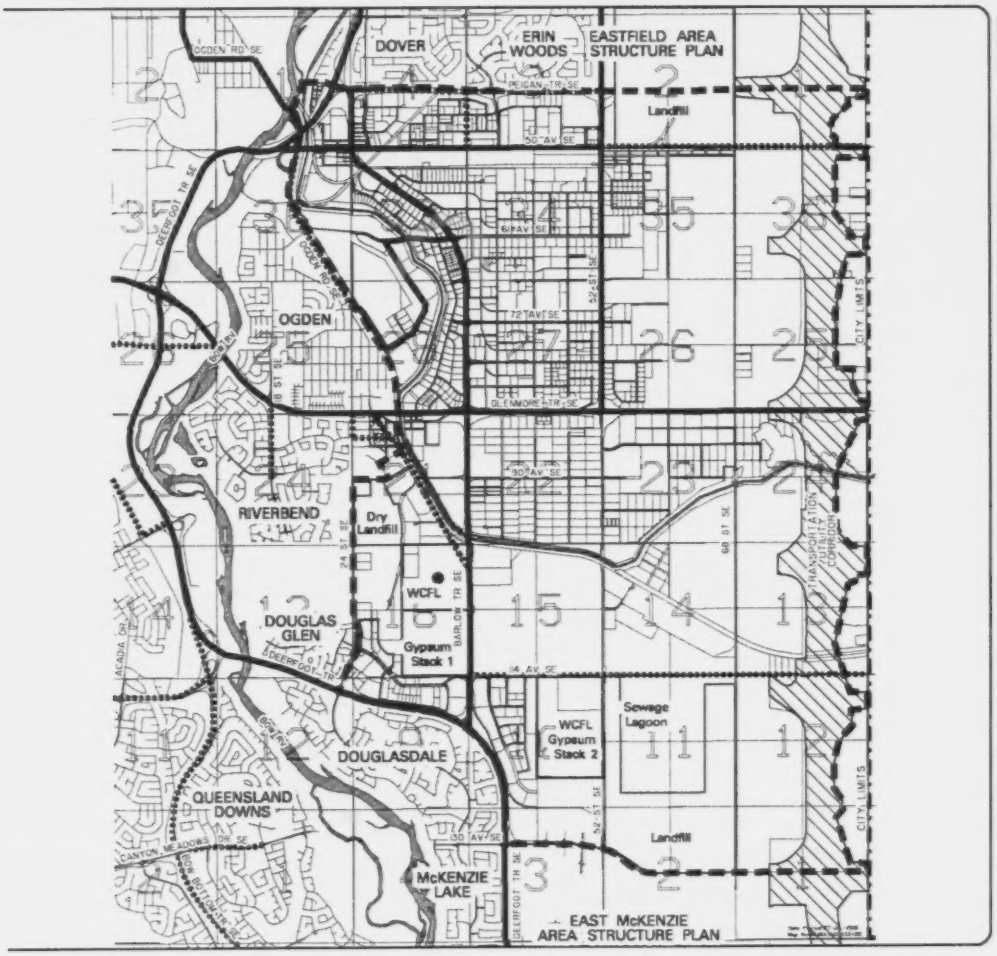
The Transportation Department has identified a tentative alignment for the southeast LRT which connects with the alignment identified in the East McKenzie ASP to the south of the study area (Map 2). It must be emphasized that the LRT alignment and the station locations are conceptual and they are subject to further review by the Transportation Department. Furthermore, appropriate land will be protected for LRT park-n-ride adjacent to station locations. Vehicular and pedestrian access to the LRT stations/park-n-ride will be determined at the outline plan stage. Finally, the LRT station location on 24 Street S.E., south of the South Hill area, will only be provided if LRT supportive uses and local access roads are provided in this area.

Recommendations:

(a) That a suitable right-of-way for a future LRT line, as shown on Map 2 or as otherwise determined by the Transportation Department, be protected at the time of outline plan approval.

(b) That, where necessary, suitable land be protected for LRT park-n-ride adjacent to proposed station locations.

(c) The LRT horizontal and vertical alignment shall accommodate site accessibility to the industrial lands.



Southeast Industrial

Map No. 4

Title
Dangerous Goods and Truck Routes

Legend

- Area Structure Plan Boundary
- Dangerous Goods Route
- Truck Route

Amended 8P2001 2001 June
Amended 25P98 1999 December
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4.4.3.2 Bus Service

Currently, the only bus service available in the study area is on Barlow Trail north of Glenmore Trail S.E. Possible future bus routes in the study area will be determined by the Transportation Department.

Recommendations:

(a) That an appropriate bus route system for the study area be determined by the Transportation Department at the outline plan stage.

(b) That bus services be provided to the study area when warranted by the extent of development, subject to Calgary Transit budget priorities.

4.5 Utility Services

4.5.1 General

As noted in Recommendation (a) in Section 4.1.1 of this Plan, the preparation of a comprehensive servicing plan in 1996 is fundamental to the successful development of the Southeast Industrial Area. This servicing plan should integrate and coordinate the major services required to ensure that a healthy supply of serviced industrial land is available in the southeast. In addition, the servicing plan should recommend, through the annual capital budget process, a phased utility extension program that takes into consideration the existing supply of serviced industrial land in various parts of the Southeast Industrial Area, the anticipated demand for serviced industrial land and any other factors considered essential to the overall implementation of the City's industrial land development strategy. **High priority should be given to the completion of this servicing plan and accompanying capital works program**.

Recommendations:

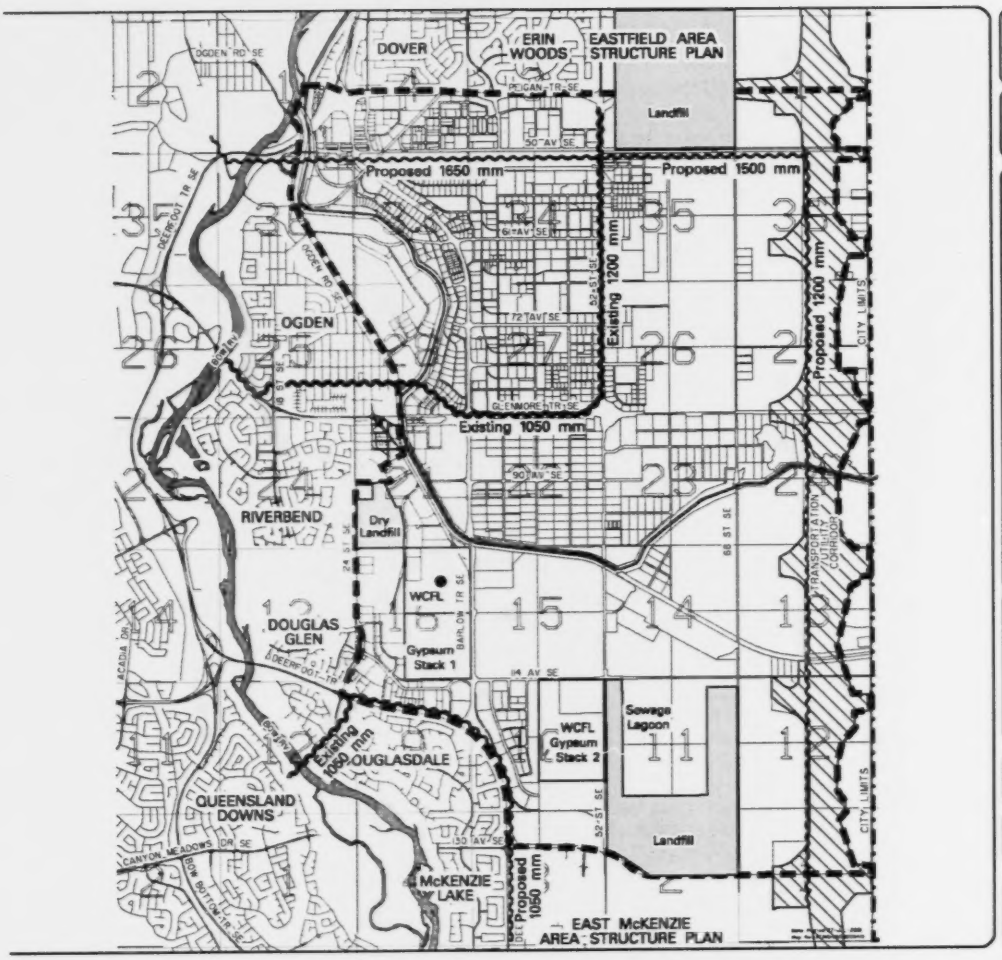
(a) That the exact alignments of all utility extensions be determined at the outline plan stage.

(b) That any modifications to the conceptual alignments of utilities will not require amendments to the Southeast Industrial Area Structure Plan.

(c) That all costs associated with temporary services and relocation of existing facilities shall be borne by landowners/developers.

4.5.2 Water Supply (Map 5)

The entire study area is within the Ogden Pressure Zone. As shown on Map 5, there are existing feedermains on Douglasdale Boulevard S.E., Glenmore Trail S.E. and 52 Street S.E. (north of Glenmore Trail). Extensions of the feedermain system are proposed along Deerfoot Trail S.E., 50 Avenue S.E. and the future East Freeway in the long term. Future development in the study area will be serviced by extending distribution watermains from the existing feedermain system. Future extensions of the feedermain system will be installed as required to maintain appropriate levels of service.



Southeast Industrial

Map No. 5

Title

Water Supply

Legend

- Area Structure Plan Boundary
- Existing Watermain
- Proposed Watermain

Amended 8P2001 2001 June
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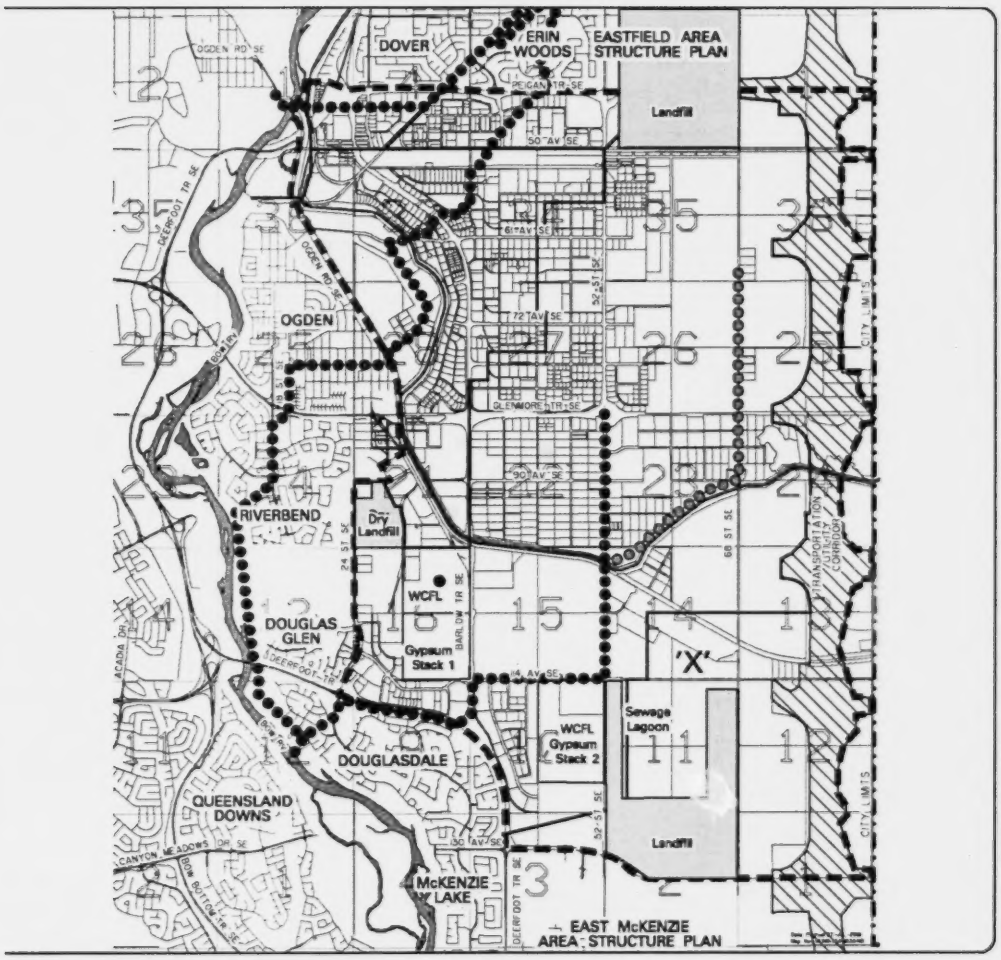
4.5.3 Sanitary Sewer System (Map 6)

The study area includes six basic catchment areas in terms of sanitary sewer services. Most of the development in these catchment areas is serviced by the existing sanitary sewer trunks (i.e., Forest Lawn Sanitary Trunk, Barlow and Ogden/Riverbend Sanitary Trunk, Shepard Sanitary Sewer Trunk). Future development in the study area will be serviced by extensions to the existing and/or proposed sanitary sewer trunks as required.

The catchment area marked "X" on Map 6 slopes to the east and is part of the future Southeast Wastewater Plant catchment area. On an interim basis, the sanitary sewer from the north portion of the "X" area (north of 114 Avenue S.E.) may be pumped to the Shepard Sanitary Trunk. Sanitary sewer servicing for the area south of 114 Avenue and east of 52 Street S.E. will be evaluated at the time of detailed sanitary sewer design for the East McKenzie area.



Southeast Industrial

Map No. 6

Title

Sanitary Sewer System

Legend

- Area Structure Plan Boundary
- Existing Sanitary Trunk
- Future Sanitary Trunk
- Catchment Boundary

'X' - See Section 4.5.3

N

Amended 8P2001 2001 June
Amended 25P98 1999 December
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1500 0 1500 3000 4500 FEET
500 0 500 1000 1500 METRES

4.5.4 Storm Sewer System (Map 7)

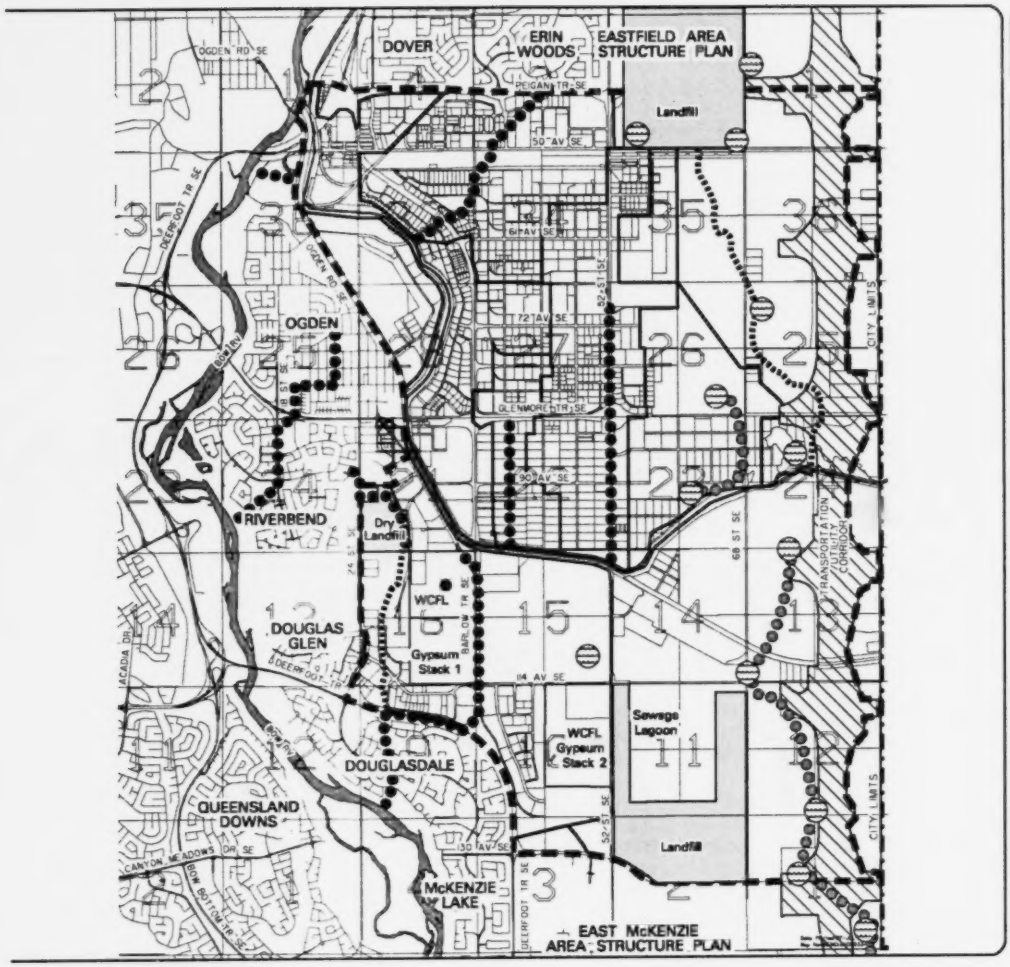
Stormwater from the Southeast Industrial Area may be drained into the Bow River, Western Headworks (W.H.) Canal and the Shepard ditch, as described below.

The catchment area north of the W.H. Canal and west of 52 Street S.E. is drained into the W.H. Canal via the storm sewer trunks existing in this area. The area north of the W.H. Canal and east of 52 Street S.E. slopes to the east. Therefore, this area may on an interim basis be drained into the existing north-south ditch combined with the proposed stormwater retention ponds as shown on Map 7. However, all future stormwater discharges into the W.H. Canal will be subject to approval by Alberta Environmental Protection.

The stormwater catchment area south of the W.H. Canal between 52 Street S.E. and the current city limits may be drained into the Shepard ditch located outside the city limits adjacent to the southeast corner of the study area. The ditch eventually leads to the Bow River at a distance of approximately 11 kilometres. However, it must be emphasized that major improvements to the Shepard ditch would be required and a certain number of stormwater retention ponds would also be needed in the study area as shown in Map 7. Future stormwater discharges into the Shepard ditch will be subject to approval by Alberta Environmental Protection. Interim storm servicing for this area will be evaluated in conjunction with the East McKenzie storm servicing planning in the future.

It should be noted that, in 1980, Alberta Environmental Protection imposed a moratorium concerning new storm outfalls into the W.H. Canal. It limits the discharge of stormwater from the areas between the canal and approximately 52 Street S.E., to the existing number of storm sewer outfalls. In this regard, Alberta Environmental Protection has recently completed a major rehabilitation program to upgrade the canal and increase its irrigation water delivery capacity. However, with the existing development north of the Canal and around Chestermere Lake, the lake cannot handle a major storm. Therefore, Alberta Environmental Protection is concerned that a major storm would cause flooding and erosion damage to the W.H. Canal and Chestermere Lake.

The **Southeast Calgary Storm Drainage Study** was prepared for the Sewer Division of the Engineering and Environmental Services Department in 1992. The City initiated the storm drainage study to analyze possible alternatives for addressing the concerns expressed by Alberta Environmental Protection. The study recommended that a wasteway be constructed connecting the W.H. Canal to the Shepard sloughs. No commitment has been made by any of the stakeholders to implement such a wasteway. However, if the Shepard Slough Complex is affected by future development in the study area, the stormwater management for the Southeast Industrial Area should be coordinated with the Municipal District of Rocky View.



Southeast Industrial

Map No. 7

Title

Storm Sewer System

Legend

- Area Structure Plan Boundary
- Conceptual Storm Pond Location
- Existing Storm Trunk
- Future Storm Trunk
- Catchment Boundary
- Existing Drainage Course / Ditch

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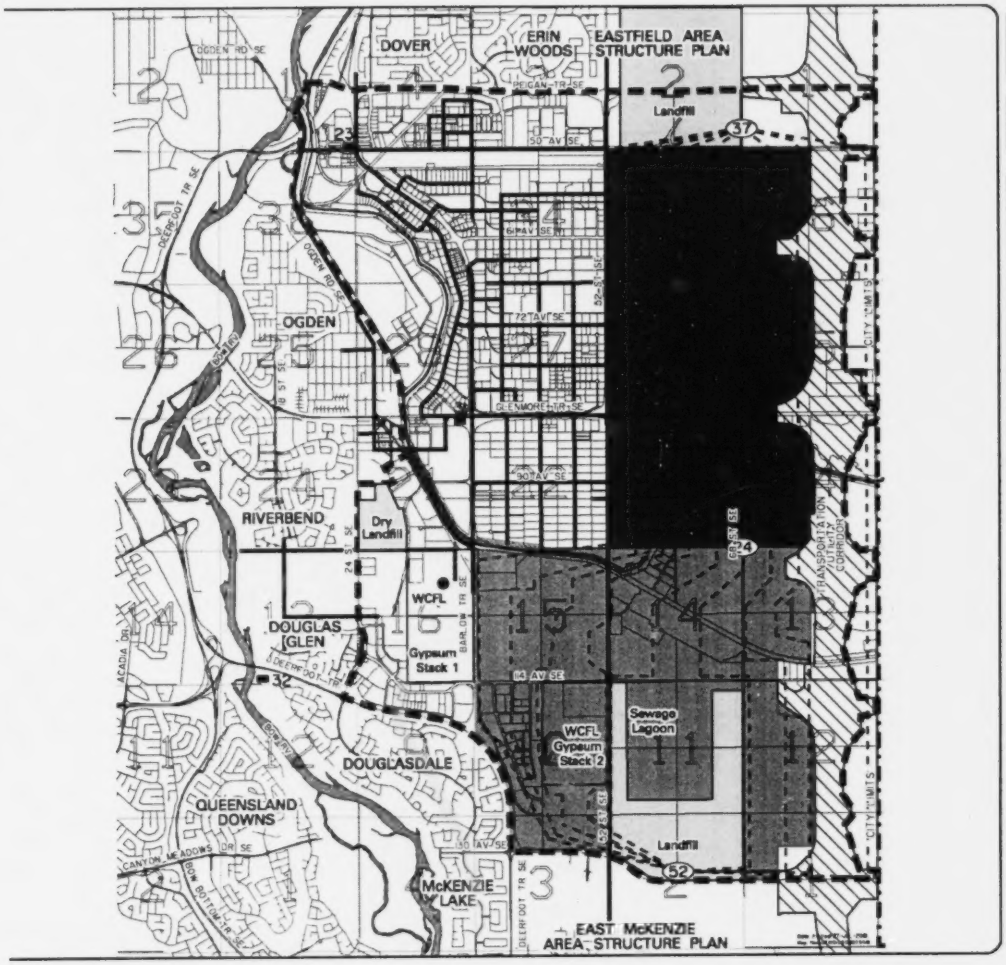
4.5.5 Electrical Service (Map 8)

Electrical service is currently available from the existing 13.8 kV feeder system, as shown in Map 8. Substation #37 is designated as a dual voltage substation (13.8 kV and 25kV) and will serve the study area at 13.8 kV on the west, and at 25kV generally east of 52 Street S.E. The conceptually shown substations #24 and #52, and associated feeder system alignment are shown on the mostly vacant east and southeast parts of the study area. The exact alignments of all future power lines will be determined at the outline plan stage. Adjustments to the conceptually shown power lines will not require amendments to the Southeast Industrial Area Structure Plan.

For further detailed information concerning electrical services, developers are required to consult with the City of Calgary Electric System.



Southeast Industrial

Map No. 8

Title

Electrical Service

Legend

- Area Structure Plan Boundary
- 32 Existing Substation
- (24) Substation 25 kV (if required)
- (37) Existing Substation 25 kV
- (52) Future Substation 25 kV
- Conceptual locations of future feeder lines
- Existing 13.8 kV Line
- 37 Substation Service Area
- 52 Substation Service Area

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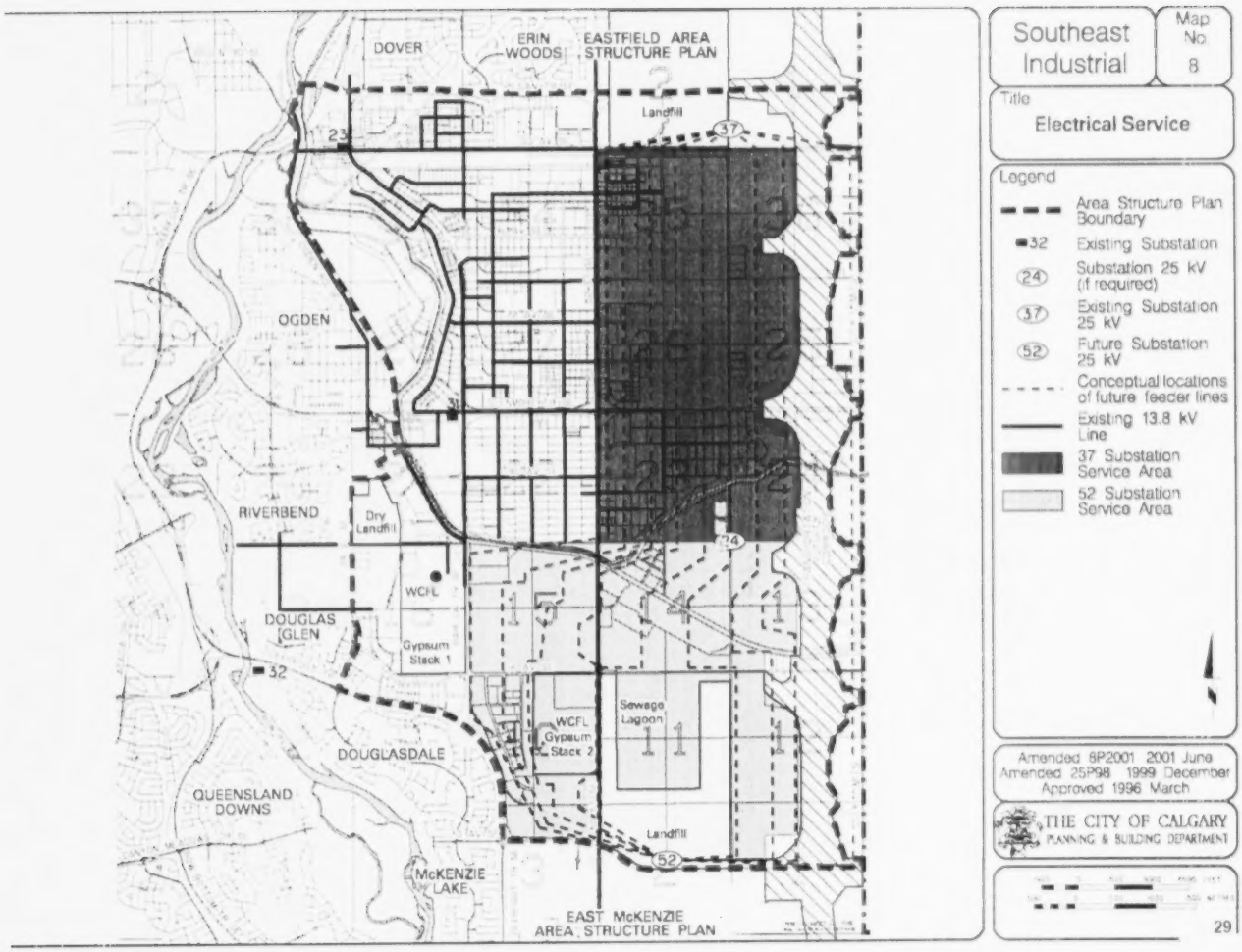
DOVER
ERIN WOODS
EASTFIELD AREA STRUCTURE PLAN
Landfill
37
23
OGDEN
RIVERBEND
Dry Landfill
24
WCFL
DOUGLAS GLEN
Gypsum Stack 1
32
Sewage Lagoon
WCFL Gypsum Stack 2
DOUGLASDALE
QUEENSLAND DOWNS
Landfill
52
McKENZIE LAKE
EAST McKENZIE AREA STRUCTURE PLAN
Southeast Industrial
Map No 8
Title
Electrical Service
Legend
Area Structure Plan Boundary
32 Existing Substation
24 Substation 25 kV (if required)
37 Existing Substation 25 kV
52 Future Substation 25 kV
Conceptual locations of future feeder lines
Existing 13.8 kV Line
37 Substation Service Area
52 Substation Service Area
Amended 6P2001 2001 June
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4.5.6 Natural Gas (Map 9)

Map 9 shows the existing high pressure gas line, a proposed high pressure line and a proposed feedermain within the study area. As part of the overall gas distribution system, two regulating stations are included. The exact alignments of the gas pipelines will be determined at the outline plan stage.

Natural gas supply will be provided in the undeveloped areas as dictated by future development.

For further detailed information regarding natural gas services, developers should consult with the Canadian Western Natural Gas Company.

Southeast Industrial

Map No. 9

Title

Natural Gas

Legend

- Area Structure Plan Boundary
- Regulating Station
- Existing High Pressure Line
- Proposed High Pressure Line
- Proposed Feedermain

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Amended 25P98 1999 December
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4.5.7 Telephone (AGT) and Shaw Cable Services (Map 10)

4.5.7.1 Telephone (AGT) Service

The Southeast Industrial Area will be served by four telephone exchanges, namely, Riverbend Exchange, Douglasdale Exchange, Ogden Exchange, and the proposed Exchange north of 61 Avenue and west of 36 Street S.E. alignment as shown on Map 10. Also, Map 10 shows the existing buried fibre cables, existing conduit routes and tentatively proposed conduit feeder routes, including the respective telephone exchange service areas.

4.5.7.2 Shaw Cable Service

The study area will be serviced from the tentatively proposed and the existing cables shown on Map 10.

Southeast Industrial

Map No. 10

Title
AGT and Cable Services

Legend

- Area Structure Plan Boundary

AGT

- Switch Location
- Proposed Switch Location
- Existing Buried Fibre Cable
- Proposed Conduit Feeder Route
- Switch Serving Area Boundary
- Existing Conduit Route

Cable

- Existing Cable
- Proposed Cable

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4.6 Development Constraint Areas

Development constraint areas include lands that may be developed only for certain types of uses subject to specific development setback requirements. The key constraint areas are adjacent to the landfill and sewage lagoon sites, the floodway along the Bow River in the northwest corner of the Plan area and the Western Co-operative Fertilizers Limited's fertilizer complex.

Within the floodway, no buildings or other structures are to be allowed. Only open space recreation uses will be supported.

Development adjacent to the landfill and sewage lagoon sites must adhere to the provisions of the Provincial **Subdivision and Development Regulation** and the **Waste Management Regulation** current at the time of development adjacent to these facilities.

In relation to the Western Co-operative Fertilizers Limited's plant, a 1,600 metre (one mile +/-) separation between the fertilizer complex flare stack and residential development was established at the time planning for the residential communities to the west and south was undertaken. ***1P99***

It should be noted that the Western Co-operative Fertilizers Limited (WCFL) has permanently decommissioned its fertilizer manufacturing facility in southeast Calgary. In view of the WCFL's current operation as a storage and distribution centre for dry fertilizer and anhydrous ammonia, the previously established separation distance of 1,300 metres between the WCFL's flare stack and residential development has been appropriately reduced to approximately 1,100 metres. This change to the separation distance applies specifically to the northeast part of the Douglas Glen residential area located west of 24 Street SE. Any further amendments to this separation distance would only be considered following receipt of a comprehensive justification for a change, consultation with WCFL and a review by Alberta Environment, and the Calgary Regional Health Authority. ***IP99, 4P2000***

For more detailed information related to development setback requirements see Section 7.4 in the **Supporting Information**.

Recommendation:

(a) That, where applicable, development setbacks as established by Provincial Regulations and advice from Provincial departments be provided in relation to the following:

- *(i) landfill/sewage lagoon sites;*
- *(ii) floodway along the Bow River; and*
- *(iii) the Western Co-operative Fertilizers Limited's fertilizer complex and phosphogypsum stacks.*

(b) The Subdivision Authority shall not approve an application for subdivision for a school, hospital, child care facility, special care facility or dwelling if the application would result in the creation of a

building site for these uses within 400 metres of the Western Co-Operative Fertilizers Limited's phosphogypsum stacks (ponds). ***23P98***

(c) The Development Authority shall not issue a development permit for a school, hospital, child care facility, special care facility or dwelling within 400 metres of the Western Co-operative Fertilizers Limited's phosphogypsum stacks (ponds). ***23P98***

(d) A land use redesignation, plan of subdivision or development permit shall not be approved where it would allow a residential use to locate closer than 1,100 metres from the anhydrous ammonia transfer terminal (flare stack) on the Western Co-Operative Fertilizers Limited (WCFL) site, corresponding to sea level coordinates of 5,647,009.829 North and 1,014.465 East. ***4P2000***

(e) A land use redesignation, plan of subdivision or development permit shall not be approved where it would allow the anhydrous ammonia transfer terminal (flare stack) on the WCFL site to locate closer than 1,100 metres from a residential uses. ***4P2000***

(f) The 1,100 metre setback distance required under (d) and (e) above shall be measured from the sea level coordinates of the flare stack of the anhydrous ammonia transfer terminal to the nearest boundary of a parcel allowing a residential use. ***4P2000***

(g) Any change to the sea level coordinates of the flare stack of the anhydrous ammonia transfer terminal shall require an amendment to this Plan. ***4P2000***

4.7 Historical Resources (Archaeological, Palaeontological and Historic Periods)

At the subdivision stage landowners/developers will be required to identify potential historical resource sites within the study area. All relevant information regarding the historical sites shall be forwarded to the Cultural Facilities and Historical Resources Division of Alberta Community Development for their review and approval.

Recommendations:

(a) That the landowners/developers proposing subdivision and/or development in the Southeast Industrial area shall consult with the Cultural Facilities and Historical Resources Division concerning potential historical resources in the study area.

(b) That, where known historical resources sites are found or the area is considered to have potential for the occurrence of such sites, the landowners/developers affected shall comply with the ***Alberta Historical Resources Act****, as required.*

4.8 Environmental Considerations

4.8.1 Potential Soil and Groundwater Contamination

Heavy usage of fuels, solvents, and other chemicals in industrial areas has lead to the potential for contamination by spillage or leaking tanks. Once the fuel or solvent has reached the groundwater, vast volumes of soil and water can be affected. In this regard, the City of Calgary, in consultation with Alberta Environmental Protection, should regularly monitor the quality of groundwater in the study area.

Additionally, there are abandoned oil or gas well sites and existing high pressure gas pipelines in the study area. For further information concerning potentially contaminated sites, landowners/developers should contact the Office for the Environment Section of the Engineering & Environmental Services Department.

4.8.1.1 Development on Potentially Contaminated Sites

There are potentially contaminated sites which may impact future development. In this regard, it is important that a detailed investigation of any such sites within the study area be undertaken before any new development is allowed. Where applicable, future development must comply with requirements of the respective civic departments and the external agencies affected (e.g., development setbacks from active and/or abandoned utilities, etc.).

Recommendations:

(a) That, where a site proposed for development is suspected of being potentially contaminated, studies shall be undertaken by a qualified consultant to determine the type and extent, if any, of contamination.

(b) That, if contamination is found, details shall be forwarded to the Alberta Environmental Protection Department, the Engineering & Environmental Services Department, Calgary Health Services, or any other appropriate agency for further review and approval of appropriate remediation plans.

(c) That all costs associated with contaminated site investigations and remediations shall be borne by the landowners/developers affected.

(d) That investigations of contaminated sites shall be completed prior to land use redesignation/development of land in the Southeast Industrial Area as per City Council's: ***Interim Policy for Site Contamination and the Land Use Redesignation and Development Permit Approval Process****, approved on 1995 June 19.*

4.8.1.2 Potential Impact on Adjacent Residential Communities and Other Industrial Uses

Some industrial uses, particularly those of a heavy industrial nature, may impact adjacent uses, be they industrial or residential. Where there is a significant potential of this occurring, environmental impact assessments should be undertaken to ensure that any development proceeds in a reasonable manner.

Recommendation:

(a) That where, in the opinion of the Approving Authority, a proposed development may affect neighbouring uses (e.g., noise, odour, dust, heat, earthborne vibrations, glare, etc.), an environmental impact assessment shall be prepared by the applicant and reviewed by the appropriate municipal, regional and Provincial agencies.

4.9 Community Services

4.9.1 Police Service

Police service is provided to most of the study area from the Police District #6 office, located at 8325 Bonaventure Drive S.E.

4.9.2 Fire Protection and Emergency Medical Services

4.9.2.1 Fire Protection

The study area is served by Fire Station #9, located at 2515 - 78 Avenue S.E. and Fire Station #25, located at 4705 - 76 Avenue S.E.

4.9.2.2 Medical Services

The hospitals nearest to the study area are: Bow Valley Centre, located at 841 Centre Avenue E. which is under review and Rockyview General Hospital, located at 7007 - 14 Street S.W. Emergency medical services are provided by Fire Station #9, located at 2515 - 78 Avenue S.E.

4.10 Development Sequence

Based on the existing topography of the study area and location of major utilities, development in the Southeast Industrial Area will continue to occur in an easterly direction north of the Western Headworks Canal. Development south of the canal will proceed in a southeasterly direction.

The roadway system will be upgraded and utility services will be extended to meet industrial development demand in the Plan area.

Supporting Information

SOUTHEAST INDUSTRIAL AREA STRUCTURE PLAN
Supporting Information
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5.0 EXISTING CONDITIONS

5.1 Natural Features (Map 11)

The study area is generally a flat to gently rolling upland prairie. However, adjacent to the western plan boundary (i.e., 24 Street S.E.) the floodplain has been filled up to the foot of a north-south escarpment with slopes greater than 15 percent. The floodplain is most pronounced from 90 Avenue south to about 115 Avenue S.E. In the southeast corner of the study area there are a number of low-lying intermittent ponds/sloughs and marshes. These features are part of the larger Shepard Slough complex which extends to the south and east of the study area. The ponds/sloughs are an important feeding and nesting habitat for waterfowl. It should be noted that most of these water bodies are intermittent because of the generally low precipitation levels in this area.

A small natural drainage course enters the study area in Section 2-24-29 W4 to the north. It meanders south and terminates at the Western Headworks Canal in approximately the centre of Section 24-23-29 W4. The natural drainage course serves as a drainage ditch from the 68 Street S.E. stormwater pond, north of the study area.

The Western Headworks (W.H.) Canal (formerly known as the Western Irrigation District or W.I.D. Canal) was constructed in 1894 by Canadian Pacific Railway and is now owned and operated by Alberta Environmental Protection. The canal extends approximately 25 kilometres from the weir on the Bow River near its confluence with Nose Creek, to Chestermere Lake, east of Calgary. The canal enters the study area in the northwest corner and runs south of Glenmore Trail S.E. The canal diverts water from the Bow River for irrigation purposes and two irrigation canals carry water out of Chestermere Lake to agricultural areas further east. The Canal only carries water for irrigation purposes from May to September, the period of agricultural water demand; the rest of the year the Canal level is lowered and the flow is stopped.

Parts of the W.H. Canal have some stands of balsam poplar. However, along most of its length tree and shrub cover is sparse.

Southeast Industrial

Map No. 11

Title

Natural Features

Legend

- Area Structure Plan Boundary
- Drainage Course / Ditch
- Intermittent Pond / Slough /Marsh
- Escarpment

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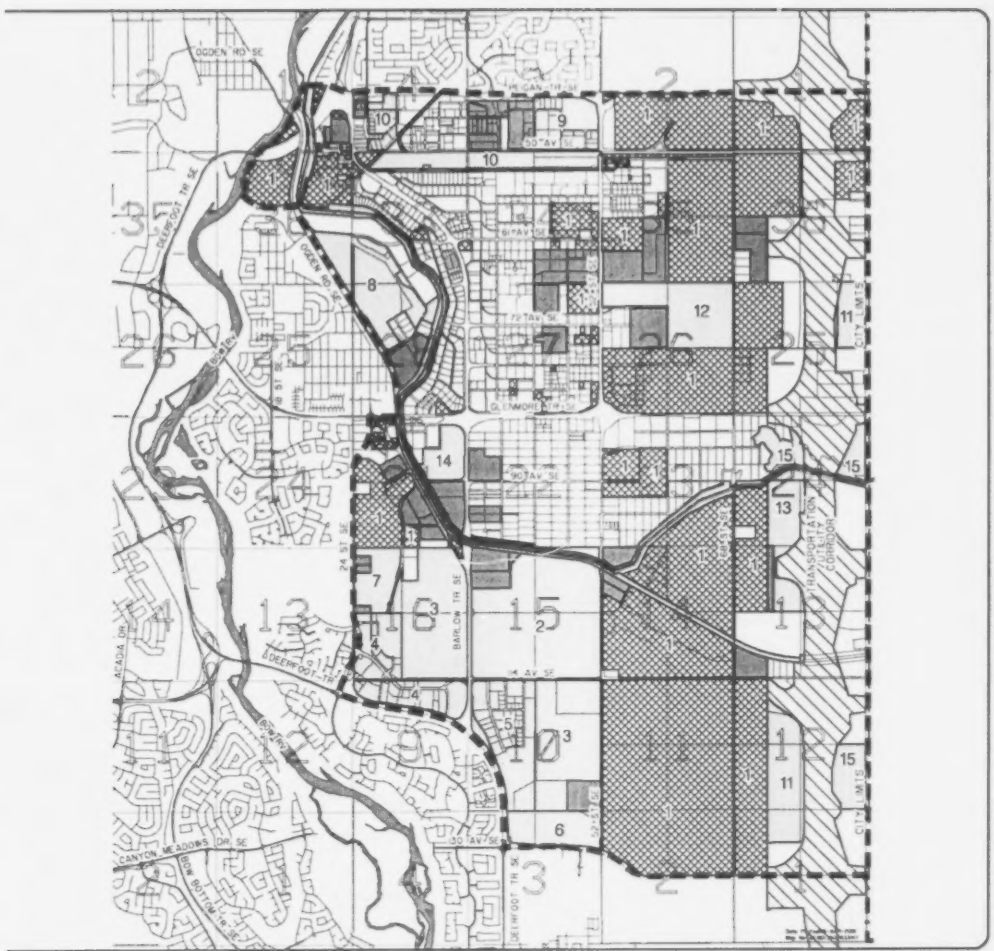
5.2 Land Ownership (Map 12)

The Southeast Industrial Area includes several major landowners. The largest single landowner is the City of Calgary, owning 1,369 hectares± (3,382 acres±) of the total study area of 5,200 hectares± (12,850 acres) in several parcels which were acquired for future industrial development. A significant portion of the City-owned land is occupied by the Shepard Landfill and Sewage Lagoon or is retained for its future expansion. Other major landowners are as shown on Map 12.

While much of the study area south of the canal is in large parcels with relatively few owners, most of the area north of the canal is in fragmented ownership. A few individuals own sizeable parcels of land in Sections 25, 26, 35 and 36-23-29 W4.



Southeast Industrial	Map No 12

Title
Land Ownership (Major Land Owners)

Legend

	Area Structure Plan Boundary
1	City of Calgary
2	Maalsa Investments Ltd
3	Western Co-Op Fertilizers Limited
4	Douglasdale Estates Inc
5	Shell Canada Ltd
6	Simpson Ranching Ltd
7	594962 Alberta Ltd
8	Canadian Pacific Railway Ltd
9	Hugh Levy
10	Canadian National Railways Co
11	Zahmol Properties Ltd
12	O. Komarnycky
13	2748355 Canada Inc Walton Development
14	Prudential Steel Ltd
15	Province of Alberta
	Other

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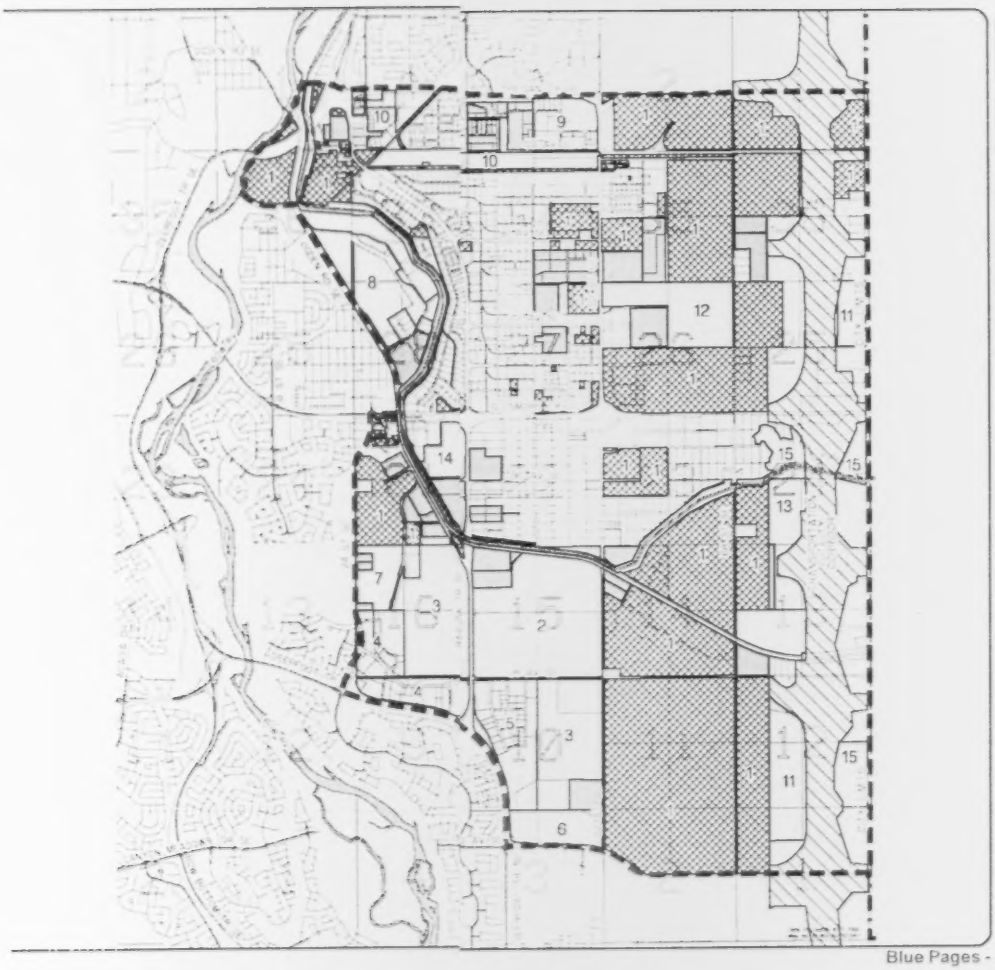

Southeast Industrial

Map No 12

Title
Land Ownership (Major Land Owners)

Legend

- Area Structure Plan Boundary
- City of Calgary
- 2 Maalsa Investments Ltd
- 3 Western Co-Op Fertilizers Limited
- 4 Douglasdale Estates Inc
- 5 Shell Canada Ltd
- 6 Simpson Ranching Ltd
- 7 594962 Alberta Ltd
- 8 Canadian Pacific Railway Ltd
- 9 Hugh Levy
- 10 Canadian National Railways Co
- 11 Zahmol Properties Ltd
- 12 O. Komarnycky
- 13 2748355 Canada Inc Walton Development
- 14 Prudential Steel Ltd
- 15 Province of Alberta
- Other

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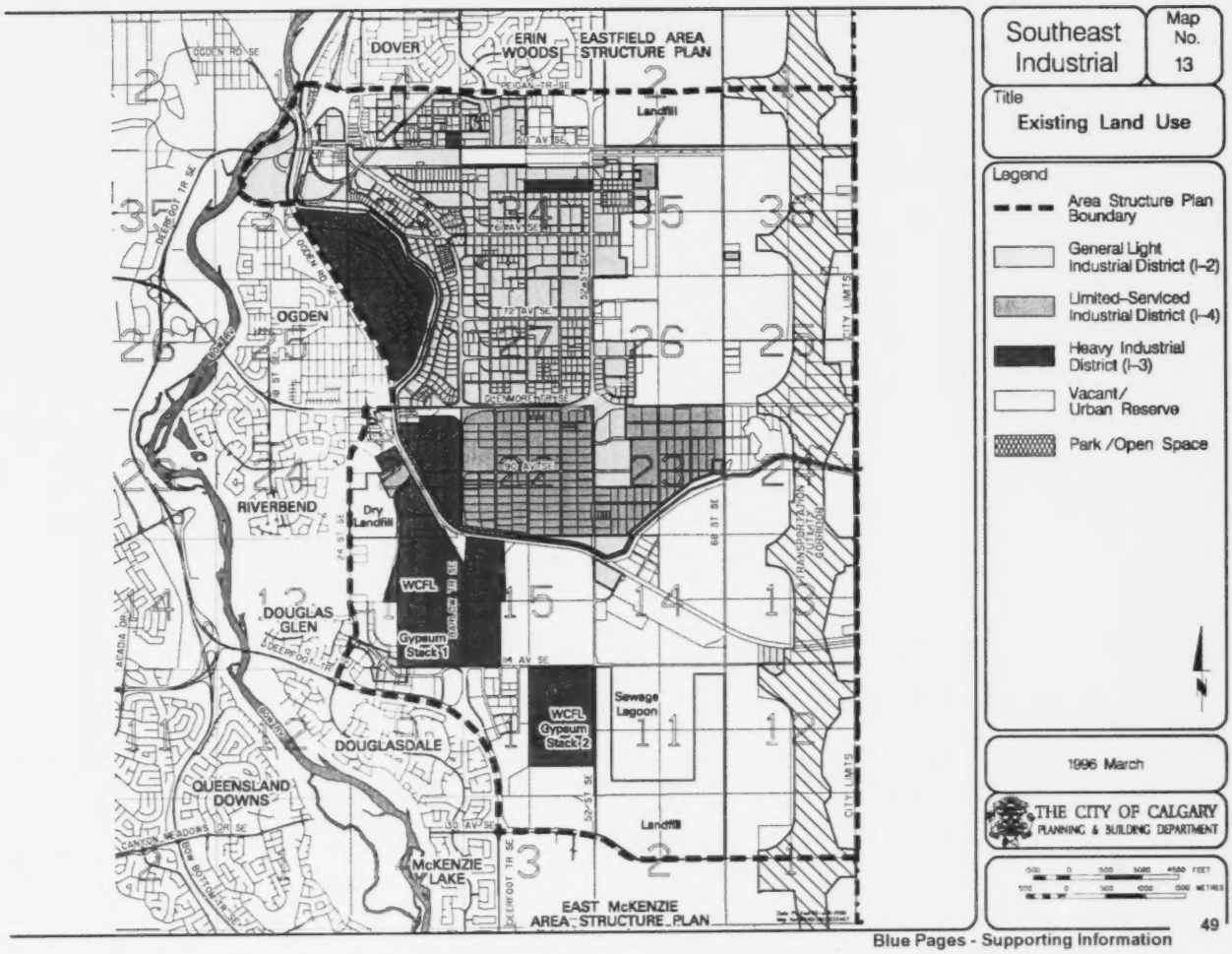
5.3 Existing Land Use (Map 13)

The developed portions of the study area are almost completely industrial, with a few exceptions. Heavy industrial uses are located in the northwest (e.g., CP Ogden Shops, IPSCO Pipe, Alberta Processors Ltd.) and the southwest (e.g., WCFL plant and associated phosphogypsum stacks). Limited-Serviced industrial uses (auto wreckers, trucking terminals, steel and concrete manufacturing plants) are generally restricted to Sections 22 and 23-23-29 W4 (north of the Western Headworks Canal). Light industrial uses exist mainly north of Glenmore Trail and east of the Western Headworks Canal.

Agriculture is the primary non-industrial use and much of the undeveloped land is being cultivated for cereal crops, particularly along the Transportation/Utility Corridor (TUC). The City's Shepard Sewage Lagoon and Landfill occupy Section 11-23-29 W4 and the northwest quarter of Section 2-23-29 W4, south of 114 Avenue and east of 52 Street S.E. The City-owned Ogden Dry Waste Landfill site is located in the southwest quarter of Section 21-23-29 W4, east of 24 Street S.E. This facility was closed in 1994. Immediately south of the Ogden Dry Waste Landfill site, a private dry waste landfill site was approved on 1994 June 23. Two mobile home parks are located in the South Hill area, southeast of the 24 Street and Glenmore Trail S.E. intersection. Some older residential dwellings can still be found in Valleyfield and Golden Triangle areas in the northwest part of the study area.

Relatively little land is provided for recreational uses except a linear open space that Alberta Environmental Protection has developed along the Western Headworks Canal through the study area, and the Calgary Soccer Centre located at 68 Avenue and 52 Street S.E.


DOVER
ERIN WOODS
EASTFIELD AREA STRUCTURE PLAN
Landfill
OGDEN
RIVERBEND
Dry Landfill
WCFL
Gypsum Stack 1
DOUGLAS GLEN
WCFL Gypsum Stack 2
Sewage Lagoon
DOUGLASDALE
QUEENSLAND DOWNS
McKENZIE LAKE
EAST McKENZIE AREA STRUCTURE PLAN
CITY LIMITS
Southeast Industrial
Map No. 13
Title
Existing Land Use
Legend
Area Structure Plan Boundary
General Light Industrial District (I-2)
Limited-Serviced Industrial District (I-4)
Heavy Industrial District (I-3)
Vacant/ Urban Reserve
Park /Open Space
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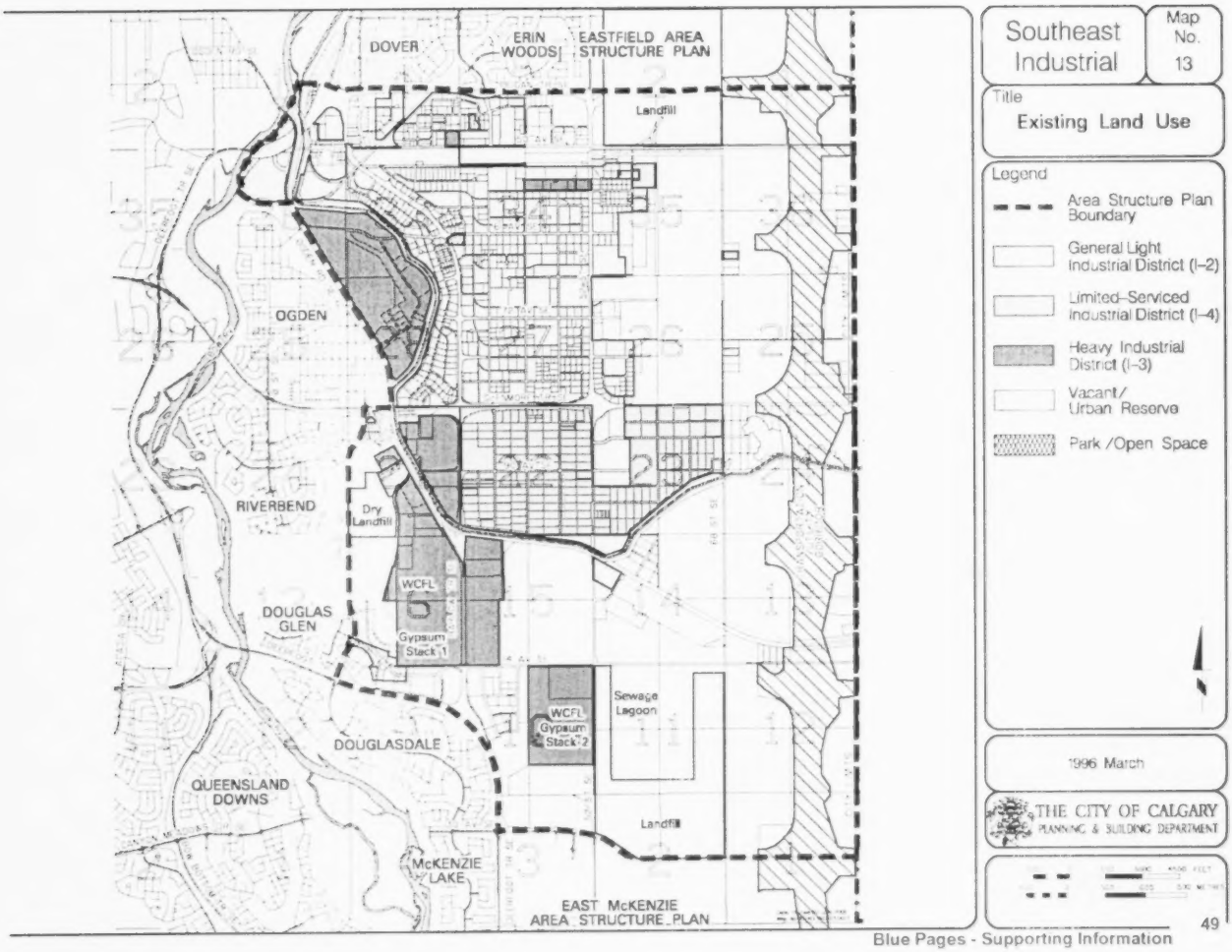
DOVER
ERIN WOODS
EASTFIELD AREA STRUCTURE PLAN
Landfill
OGDEN
RIVERBEND
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WCFL
Gypsum Stack 1
DOUGLAS GLEN
Sewage Lagoon
WCFL
Gypsum Stack 2
DOUGLASDALE
QUEENSLAND DOWNS
Landfill
McKENZIE LAKE
EAST McKENZIE AREA STRUCTURE PLAN
Southeast Industrial
Map No. 13
Title
Existing Land Use
Legend
Area Structure Plan Boundary
General Light Industrial District (I-2)
Limited-Serviced Industrial District (I-4)
Heavy Industrial District (I-3)
Vacant / Urban Reserve
Park /Open Space
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The current percentage distribution of the existing industrial development by land use districts within the Southeast Industrial ASP area is included in the following table.

Based on the information contained in Table 1, the total amount of developed and/or designated industrial land use is 2,700 hectares± (6,672 acres±) which is approximately 52 percent of the total Southeast Industrial Area. The remaining 48 percent of the study area is undeveloped.

TABLE 1: Distribution of Existing Industrial Development by Land Use Districts

General Light Industrial District (I-2)*	Heavy Industrial District (I-3)*	Limited-Serviced Industrial (I-4)*	Landfill Sites	Vacant Land (UR Land)	Total ASP Area (Excluding TUC and W.H. Canal)
1,104 ha±	632 ha±	450ha ±	514 ha±	2,500 ha±	5,200 ha±
(2,728 ac±)	(1,562 ac±)	(1,112 ac±)	(1,270 ac±)	(6,177 ac±)	(12,850 ac±)
21.23%	12.15%	8.65%	9.9%	48.07%	100%

* Includes both vacant and developed land.

Source: Planning & Building Department

5.4 Development Trends

Calgary has become a key distribution centre for Western Canada. With increased activity in this area due to recent trade agreements and a healthy economy, the vacancy rate for industrial space fell 1.9 percent points to 3.85 percent at the end of 1994. It is quite evident that demand for industrial land is growing in Calgary. Mainly, there is a demand for distribution facilities. Free standing and rail serviced buildings with high ceilings are most in demand, particularly in central and southeast Calgary.

Calgary has seen absorption approaching about one million square feet of industrial space per year. The Foothills Industrial area (north part of the study area) is the dominant area for absorption, with 40 percent of the overall annual absorption taking place there.

During 1995, much of the land absorption will include build-to-suit construction and expansion of existing facilities. The majority of such construction will occur in the Foothills Industrial area, as several developers have assembled large parcels of land for development.

Demand for industrial land in the Foothills Industrial area is expected to remain high from 1995 to 2000 and beyond, as distributors continue to flourish in Calgary. With rail servicing becoming more important to many large users, demand for industrial land in Foothills will remain strong, since it offers the best selection of rail services particularly for major developments (e.g., warehousing and distribution industries).

6.0 POLICY CONTEXT (Map 14)

6.1 Transportation/Utility Corridor (TUC)

The Transportation/Utility Corridor was established to protect the right-of-way for the future East Freeway (part of a "ring road" to encircle Calgary) as well as rights-of-way for provincial and municipal utilities (e.g., power lines, pipelines, sewer trunks). The current boundary of the TUC is approximately as shown on Map 3. Lands acquired by the Province which are surplus to the requirements of the TUC may eventually be disposed of and allocated to other uses. Within the TUC, Ministerial consent is required prior to allowing any development (including the installation of utilities and services).

A substantial amount of Crown land is under lease with stringent conditions to protect TUC land for the primary uses. Such leases allow TUC land to be productively maintained, usually through interim uses, agricultural activities or other compatible secondary uses. All land uses must be compatible with adjacent land uses outside the corridor, as well as other corridor users. In 1983 a report, **Calgary and Edmonton Transportation/Utility Corridors: Secondary Land Use Study** was prepared for Alberta Environment and was revised in 1989. The report included various planning concepts and guidelines under which particular secondary land uses might be appropriate in maximizing corridor land use and in integrating the corridor into the surrounding urban uses. Secondary uses may occupy the land surface area above the pipelines or other utilities below the power lines, or be located on the buffers and adjacent to the highways. The aforementioned study contains a list of secondary uses which would be appropriate within the corridor. These uses are divided into the following three groups:

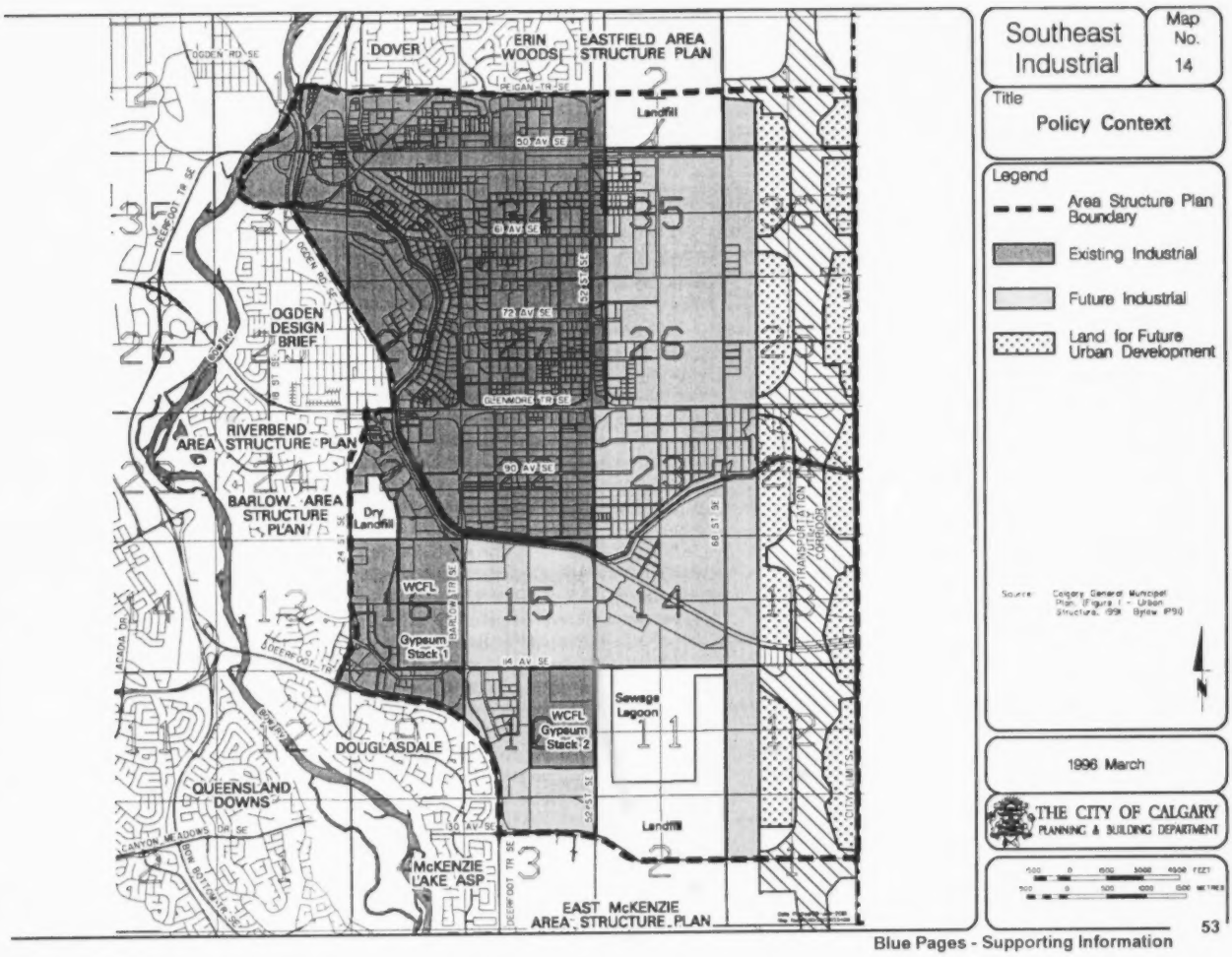
(a) agriculture;

(b) utilities, parking and storage; and

(c) parks and recreation.

6.2 The Calgary General Municipal Plan

The **Calgary General Municipal Plan** was adopted by City Council in 1979, and has since undergone a number of amendments. Subsequent to approving the **Southeast Policy Report** on 1980 April 15, City Council adopted Bylaw 7P80, amending the General Municipal Plan. This amendment was based on the recommendations of the **Southeast Policy Report**, and is incorporated into the General Plan. Map 14 shows part of the General Plan Urban Structure related to the Southeast Industrial area, which was adopted as part of the **Calgary General Municipal Plan** amendment on 1991 January 14 (Bylaw 1P91).


DOVER
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Landfill
OGDEN DESIGN BRIEF
RIVERBEND AREA STRUCTURE PLAN
BARLOW AREA STRUCTURE PLAN
Dry Landfill
WCFL
Gypsum Stack 1
Sewage Lagoon
WCFL
Gypsum Stack 2
Landfill
DOUGLASDALE
QUEENSLAND DOWNS
McKENZIE LAKE ASP
EAST McKENZIE AREA STRUCTURE PLAN
Southeast Industrial
Map No. 14
Title
Policy Context
Legend
Area Structure Plan Boundary
Existing Industrial
Future Industrial
Land for Future Urban Development
Source: Calgary General Municipal Plan (Figure 1 - Urban Structure, 1998 Bylaw P98)
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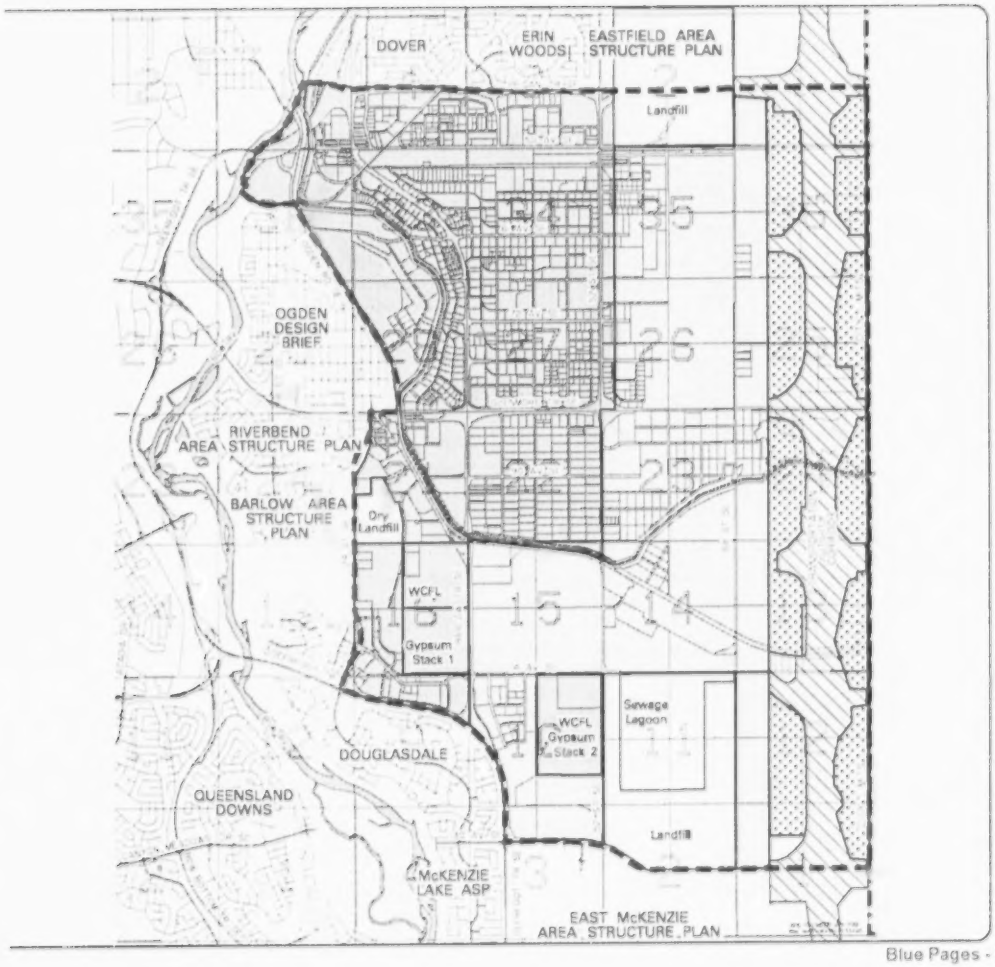
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Landfill
McKENZIE LAKE ASP
EAST McKENZIE AREA STRUCTURE PLAN
Southeast Industrial
Map No. 14
Title
Policy Context
Legend
Area Structure Plan Boundary
Existing Industrial
Future Industrial
Land for Future Urban Development
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The industrial land use pattern included in the **Calgary General Municipal Plan** was based on a projection of industrial land requirements in the southeast sector to the year 2001, from which a 20-year demand of between approximately 2,400 and 2,600 hectares (6,000 to 6,500 acres) was forecasted. The General Plan concept accommodated this demand in an aggregate sense, although the allocation of land to "light", "heavy" and "limited-serviced" industrial use bears no relation to demand forecasts. Rather, the concept was based on an extension of the land use patterns existing at that time, availability of rail access, the proposed staging and timing of servicing, and the compatibility with adjacent land uses. Light industrial uses were to provide a buffer between the heavy industrial areas and adjacent residential developments to the north, west, and south.

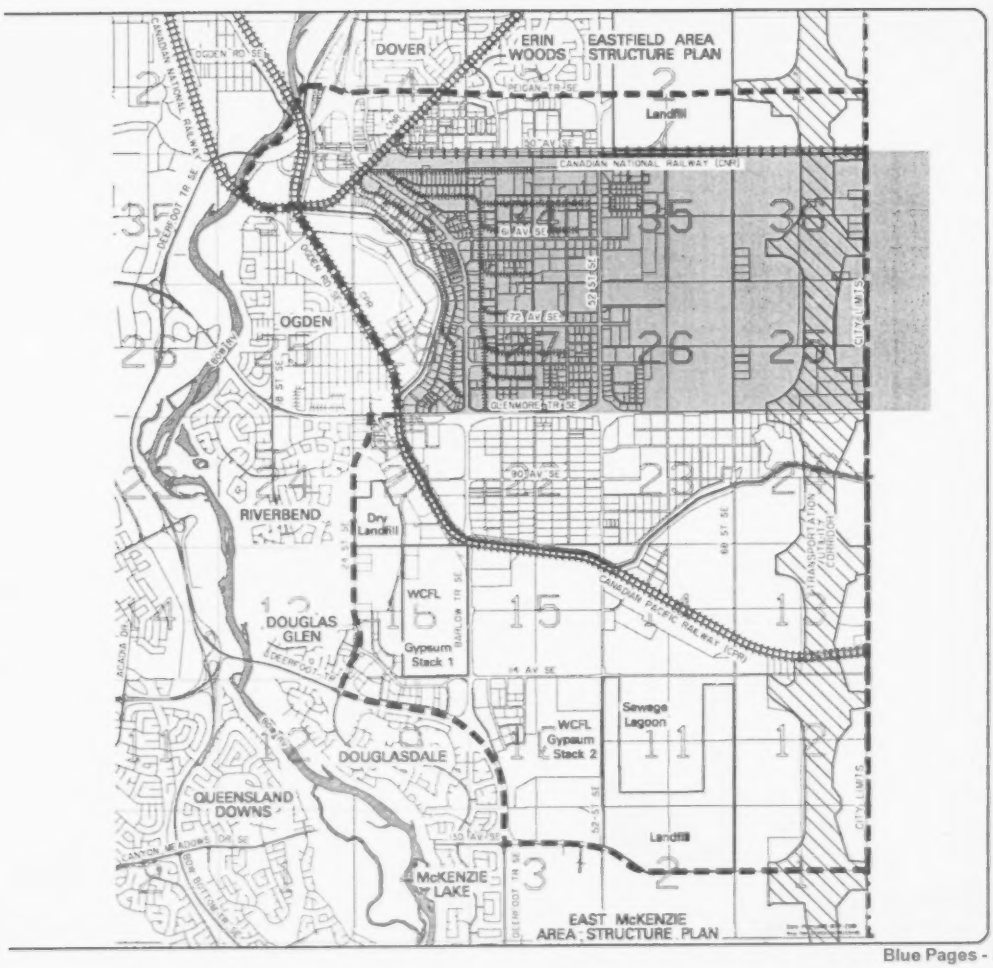
6.3 Southeast Policy Report

On 1980 April 15 City Council approved the **Southeast Policy Report**, which established a broad land use policy for the entire southeast sector of the city. The policy report establishes a continuous band of residential development along the west side of the study area adjacent to the Bow River. Residential development also extended across the southern edge of the Southeast Industrial Area. Section 6.12 describes the planning for these adjacent areas. The remainder of the area was retained for industrial uses.

The general land use concept for the industrial area was a mixture of light, heavy and limited-serviced industrial uses. Heavy industrial uses were generally limited to south of the Western Headworks Canal, while light industrial uses were proposed for the area north of the canal, as well as serving as a buffer zone between the heavy industrial uses and the adjacent residential land uses to the north, west, and south. Because of storm drainage constraints, lands east of 52 Street were designated for limited-serviced industrial uses pending the implementation of a stormwater management plan. The plan was intended to accommodate industrial development for a period of 15 to 20 years.

6.4 The Tri-Party Agreement (City of Calgary, Canadian National and Canadian Pacific Railways - Map 15)

In 1961 the City of Calgary entered into a 20-year agreement with Canadian National Railways (CNR) and Canadian Pacific Limited (CP) designed to facilitate industrial development in an area of roughly 4,800 hectares (12,000 acres) which extended to the east of the present city limits. Within the area covered by the agreement inter-switching charges are not levied by the railways. A major outcome of the Agreement was the City's development of the Foothills and East Foothills industrial subdivisions, and the provision of rail access to them.



Southeast Industrial

Map No. 15

Title

Tri-Party Agreement

Legend

- Area Structure Plan Boundary
- Spur Line
- Railway (Main Line)
- Tri-Party Agreement (CN / CP / City of Calgary)

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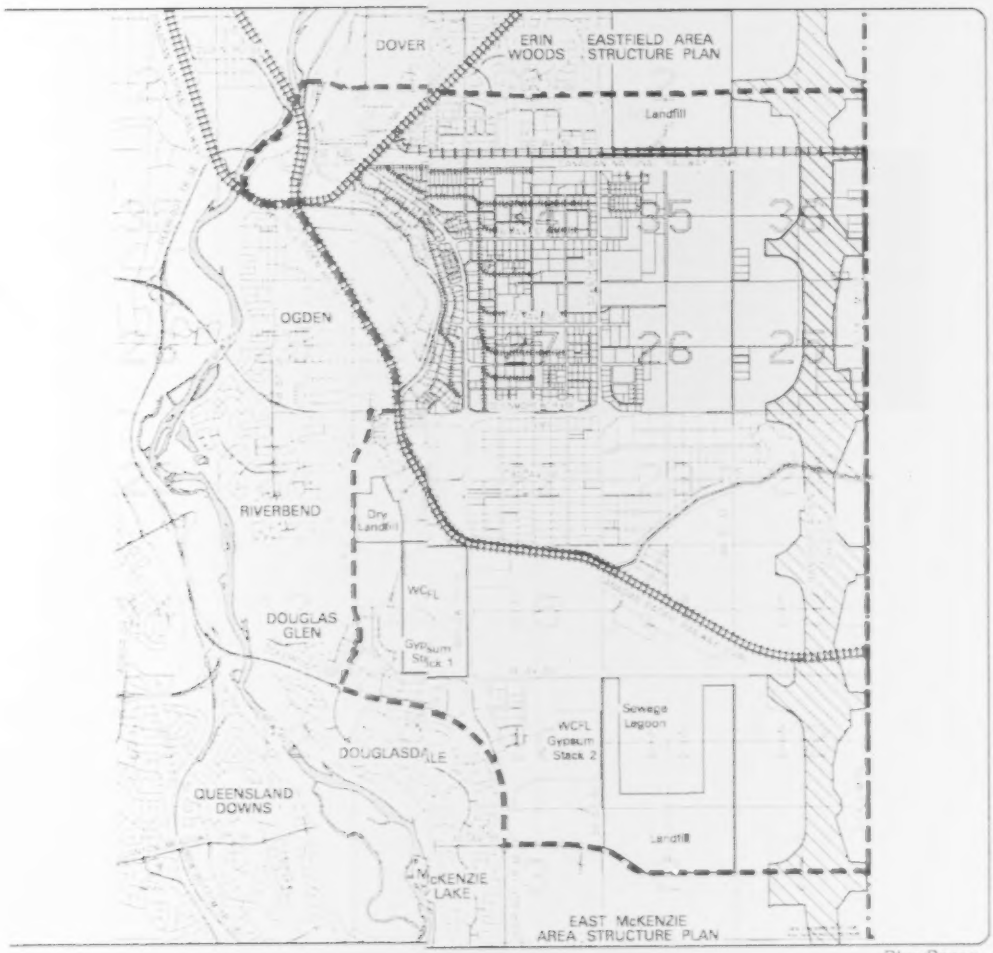

Southeast Industrial

Map No. 15

Title
Tri-Party Agreement

Legend
- Area Structure Plan Boundary
- Spur Line
- Railway (Main Line)
- Tri-Party Agreement (CN / CP / City of Calgary)

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In 1981 the Agreement was renegotiated and the new agreement covered lands within what was then the city boundary. The new Agreement stipulates that the City shall endeavour to secure title to all economically developable lands in the area covered by the agreement, and that the railways shall construct all necessary trackage required to service industrial sites by the end of the construction season following the completion of the sub-grade. For the bulk of Section 35-23-29 W4, and the northerly portion of Section 26-23-29 W4, shall be reserved for industrial development requiring trackage. However, in the easterly portion of the aforementioned sections, approximately 25 percent of the area shall be used by industrial development that may or may not require trackage. The Agreement was to 1991 (or until all the lands within the boundaries were fully developed). The Agreement has been renegotiated. Because of good rail access, this area has been preferred for major industrial development.

6.5 Calgary Planning Commission Interim Development Guidelines Related to Sections 22 and 23-23-29 W4

This area was annexed to the City in 1961 with conditions that restricted installation of utilities to owner petitions. As the owners did not want to bear the cost of local improvements, the area has developed within the original system of survey.

In recognition of the demand for low cost, unserviced industrial land in relatively large parcels, the Calgary Planning Commission in 1977 approved interim development guidelines aimed at protecting Section 22-23-29 W4 for such uses. Similar guidelines, with some modifications, were adopted for Section 23-23-29 W4 in 1978 because no design brief or policy report for the area was available. The interim development guidelines were superseded by the **Southeast Policy Report**.

Shortly after Council approved the **Southeast Policy Report** in 1980 all of the developed lands in Sections 22 and 23-23-29 W4 were redesignated from DC Direct Control District to I-4, Limited-Serviced Industrial District. However, the Policy Report recognized that, with construction of the 52 Street sanitary sewer trunk, there would undoubtedly be pressure from the landowners/developers to convert large portions of these two sections to fully serviced light industrial (I-2) districts.

Section 22-23-29 W4 is now almost fully developed with a wide variety of industrial uses, ranging from auto wreckers to trucking terminals to precast concrete manufacturers, within a subdivision of 4 to 10 acre parcels with multiple ownerships. The area is characterized by larger lots with electricity, gravelled roads and ditches for storm drainage. In general, water is either trucked in or pumped from private wells. Sanitary sewer service is by means of private septic systems or pump out tanks. Nearly half of Section 23-23-29 W4 is developed under the same guidelines that applied to Section 22-23-29 W4. However, it should be noted that watermains will be extended into Section 22-23-29 W4 during the second half of 1995, while the roads in this area will be upgraded in early 1996 by implementing the **Local Improvement Bylaw 9B95**, adopted by City Council on 1995 June 5.

The **Calgary Land Use Bylaw 2P80** contains an I-4, Limited-Serviced Industrial District which is

> *"to provide for those uses requiring large tracts of land with minimal or no land servicing requirements. Such uses are characterized by the need for outside storage or outside processing, limited structural development and the generation of low traffic volumes."*

A meeting held in March 1995 between the landowners/tenants in Section 22-23-29 W4M and the Engineering & Environmental Services Department revealed that the land owners were still reluctant to participate in a full program of servicing. There remains a demand for limited-serviced industrial sites in Calgary, and this area is the only one in the city of significant size with an I-4 land use. Other areas within the Southeast Industrial ASP may be suitable for uses of this nature. For example, the areas directly east of 68 Street S.E. are not expected to be fully serviced for several years. Accordingly, these areas would be suited for limited-serviced industrial uses. Where lands cannot be serviced, subdivision should be discouraged. Furthermore, it would be advisable to continue to restrict parcel size to a minimum of 1.6 hectares (4 acres), as required by the I-4 Limited-Serviced Industrial District Discretionary Use Rules in the **Calgary Land Use Bylaw 2P80**, particularly if the area cannot be serviced. However, future limited-serviced industrial areas must ensure adequate on-site stormwater drainage, water supply, and paved roads for vehicular traffic.

6.6 Airport Vicinity Protection Area (AVPA) Regulation

The extreme northwest corner of the study area lies under a flight path of the Calgary International Airport. In 1979 the Alberta Government adopted the **Calgary International Airport Vicinity Protection Area (AVPA) Regulation** under the **Planning Act**, primarily to control land use in proximity to the airport.

The estimated aircraft noise levels are approximated by Noise Exposure Forecast (NEF) contours. The NEF contours are established by Transport Canada and serve as the basis for determining allowable land uses in the AVPA Regulation. The Regulation also established the Calgary International Airport AVPA boundary. The Regulation contains a list of the types of uses deemed appropriate (and therefore allowable) on lands within the various NEF contours inside the boundary of the airport protection area. The small portion of the study area affected by the regulation lies between the 25 NEF contour and the 30 NEF contour, within the AVPA boundary. As a result, certain land uses are restricted within this area. However, the affected lands are bounded by Deerfoot Trail, the Bow River and Ogden Road. The planning concept identifies the affected area for future park/open space uses, therefore the restrictions will not apply.

6.7 Policy for Environmentally Sensitive Areas

In 1979 the Calgary Planning Commission adopted: **A Policy for Environmentally Sensitive Areas**. This policy sets out a number of objectives and criteria which guide the preparation of area structure plans and other land use planning policy documents. In some cases, lands which meet the criteria for protection in their natural state due to environmental sensitivity will qualify for dedication as environmental reserve (ER), as provided for by Provincial planning legislation. This dedication, if any, will be determined at the outline plan stage.

The Environmentally Sensitive Areas Policy is currently under review.

6.8 Calgary River Valleys Plan (CRVP), 1984

The **Calgary River Valleys Plan** was approved by City Council on 1984 April 30. The plan includes policies with respect to land use planning and development in Calgary's river and creek valleys, such as open space provisions and floodplain management. Development in the Southeast Industrial Area will adhere to the CRVP policies, where applicable (see Section 7.4.2.).

6.9 The William Pearce Water Conservation Area

The Western Headworks Canal (W.H. Canal) runs through the study area leading to Chestermere Lake east of Calgary. The canal and its right-of-way are now owned and administered by Alberta Environmental Protection, which refers to the facility as the William Pearce Water Conservation Area (WPWCA).

A recreational concept plan was prepared for the WPWCA in 1974, and was subsequently endorsed in principle by City Council. This was followed up in 1978 with a site development study which outlined a program of implementation for recreational proposals for that portion of the canal located north of 50 Avenue S.E. (mostly outside of the study area). The study also provided the following guidelines with respect to industrial development adjacent to the canal:

(a) Buildings and other structures should be set back a minimum of 15 metres (50 feet) from the edge of the canal right-of-way.

(b) Owners of land abutting the canal should be encouraged to plant trees or to construct berms alongside the right-of-way, to create a visual buffer and to enhance the canal setting.

(c) The City should ensure that adequate provisions are made for access to focal points along the canal, such as picnic areas, canoe launching pads, pedestrian and cycle paths.

(d) The City should carefully assess the impact on the volume and quality of water in the canal of substantially increased level of stormwater drainage, and should discuss alternative stormwater management schemes for the Southeast Industrial Area with Alberta Environmental Protection.

These guidelines were endorsed by Council at the time it adopted the **Southeast Policy Report** in 1980.

In 1985 Alberta Environmental Protection launched a major rehabilitation program to upgrade the Canal. The focus of the program is to increase its irrigation water delivery capacity, while at the same time to do intensive landscaping in cooperation with Calgary Parks & Recreation. The rehabilitation program will be completed in 1995. It should be noted that industrial wastes, storage yards, garbage and other visual intrusions such as advertising signs distract from the aesthetic value of the present canal right-of-way. Additionally, it is felt that screens should be planted around storm sewer outfalls.

6.10 Urban Park Master Plan, 1994

The **Urban Park Master Plan**, approved by City Council on 1994 March 07, identifies the former Imperial Oil Refinery site as a park for active and passive recreational uses. Additionally, the plan supports the integration of the current pathway/ bikeway system with recreation nodes along the Western Headworks Canal.

6.11 Natural Area Management Plan, 1994

The **Natural Area Management Plan** was approved by City council on 1994 May 02. This policy report identifies the north-south natural drainage course existing between Peigan Trail S.E. and the Western Headworks Canal as a significant wetland with respect to the present vegetation and wildlife. Additionally, the low lying sloughs in the study area are noted as significant wetlands serving as feeding and nesting habitat for waterfowl, shorebirds and migratory birds.

6.12 Planning for Adjacent Areas

Map 14 identifies the areas covered by design briefs and area structure plans in the southeast (Barlow Policy Report, Ogden Design Brief, Area Structure Plans for Eastfield, Riverbend, Barlow, McKenzie Lake and East McKenzie).

(a) Ogden Design Brief, 1977

The **Ogden Design Brief** was approved in 1971 and revised in 1977. It allowed for an ultimate population of approximately 11,000 to 12,000. A major concern of the Ogden residents is that no new heavy industry be permitted to develop adjacent to the community, including the former Imperial Oil Refinery site, north of the CNR tracks. It should be noted that an Area Redevelopment Plan for Ogden may be initiated in 1996.

(b) Eastfield Area Structure Plan, 1978

The boundaries of the **Eastfield Area Structure Plan** (ASP) are generally 17 Avenue S.E., 68 Street S.E., 50 Avenue S.E. and the CNR Three Hills rail line. The planning concept was for primarily residential land use but with no residential uses south of Peigan Trail freeway/expressway (formerly referred to as 43 Avenue Freeway). The freeway/expressway forms a major break between the residential land uses to the north and light industrial uses to the south. In the Eastfield ASP the industrial area south of Peigan Trail to 50 Avenue S.E. is shown as light industrial uses, to function as a buffer between heavier industrial development to the south and the residential development to the north. The light industrial development was to be high quality in order to be visually attractive and environmentally acceptable to adjacent residential development.

The land use policy contained within the Southeast Industrial ASP is consistent with that contained in the Eastfield ASP.

(c) Riverbend Area Structure Plan, 1979

In adopting the **Riverbend Area Structure Plan** (ASP), City Council adhered to the Alberta Environmental Protection Department's requirement of a 1600 metre (one mile) buffer between heavy industry [originally measured from the mid point of Western Co-operative Fertilizers Limited's (WCFL) ammonia plant] and residential development. As well, the ASP required caveats to be placed on all residential properties within 1600 meters (one mile) of the property boundary of the plant (located in the northeast quarter of Section 16-23-29 W4) notifying purchasers of the properties in proximity to the plant. This requirement was also included in the Barlow ASP which was adopted in 1980.

(d) Barlow Area Structure Plan, 1980

The **Barlow Area Structure Plan** (ASP) land use concept includes several major land uses. Residential and associated uses are designed for a population of 31,800 to 36,400. Light industrial uses and a small area of heavy industrial use are planned for the area between 18 Street and 24 Street influenced by the one mile setback from the midpoint of the WCFL plant. Light industrial uses are to serve as a buffer for the residential areas from the heavier industrial areas to the east. Residential development has proceeded in Douglasdale Estates south of Deerfoot Trail. Additionally, residential development has commenced directly north of Deerfoot Trail. However, due to the considerable earth moving required to raise the land above the 100-year floodplain levels adjacent to the Bow River, no residential development has occurred so far.

A 1983 Amendment to the **Barlow Area Structure Plan** established a principle of notification for:

(i) Residential development within 1,600 metres (one mile) of the NE quarter of Section 16-23-29 W4 (the WCFL main plant); and

(ii) Land for residential development within 1,200 metres (3,937 feet) of the SE quarter of Section 16-23-29 W4 and NE quarter of Section 10-23-29 W4 and the north half of the SE quarter of Section 10-23-29 W4 (the north and south phosphogypsum ponds). The amendment required development agreements to stipulate that a specified statement be registered on the title of each property by way of a caveat concerning emissions that may be a nuisance.

In 1992 it was clarified that the 1,600 metre (one mile) setback for residential development should be measured from the flare stack of the ammonia plant (the source of possible nuisance emission)

rather than from the midpoint of the plant. This change has slightly shifted the setback area and is reflected in the Douglasdale outline plans. In this regard, it is important to note that the WCFL's ammonia plant has been closed.

(e) East McKenzie Area Structure Plan, 1986

The **East McKenzie Area Structure Plan** (ASP) was adopted in 1986 and the land use concept is for a residential community and associated uses with a population of 30,100 to 42,700. Provision is made in the ASP for protection of a corridor 15 metres wide for a future southeast Light Rail Transit (LRT) corridor.

(f) McKenzie Lake Area Structure Plan, 1992

The **McKenzie Lake Policy Statement and Area Structure Plan** was adopted in 1979. Development began in 1981, but with a change in ownership and major revisions to the plan, a revised area structure plan (the **McKenzie Lake Area Structure Plan** (ASP)), was adopted by Council in 1992. The McKenzie Lake ASP concept is for a residential community with a population of 14,000 to 17,000. The land use concept is for predominantly single family residential and other supporting uses.

(g) South Hill Area

The South Hill area is located directly south of the Glenmore Trail S.E. freeway/expressway and east of the realigned 24 Street S.E., a major road.

The **Barlow Policy Report**, approved in July 1975, has been superseded by more recent area structure plans and amendments to the **Calgary General Municipal Plan**. However, the report led to a Council policy to phase out the residential development in the South Hill area, located south of the Glenmore Trail freeway/expressway between what was then 21A Street and 27 Street S.E. The City agreed to buy any or all of the properties but to maintain these homes and the status of the residential development until 1985, after which time the land would be used for industrial.

In 1986, Council was advised that the City still did not have full ownership of the land in South Hill and directed the Administration to continue acquiring residential properties on an opportunity basis.

The **Riverbend Area Structure Plan** (ASP) was amended in 1992 to reflect a proposal to develop the lands in the northeast part of Riverbend for residential instead of industrial uses.

The long-term transportation plan for the area requires 24 Street to be realigned with an intersection at Glenmore Trial and 26 Street S.E. Council determined that, with the future realignment of 24 Street S.E., the lands to the west of the realigned 24 Street would be suitable for residential development. As a result, a major part of the residential component of South Hill was integrated with the Riverbend community.

Although South Hill is recognized as being part of the Ogden community, it is actually separated from Ogden to the north by an expressway, and from Riverbend to the west by a major road. Furthermore, most of the existing residential development in South Hill became part of Riverbend when City Council approved the realignment of 24 Street S.E. as the easterly boundary of the Riverbend area to accommodate residential development in place of the previously approved industrial uses (Reference: Riverbend ASP Amendment 1992 April 23, Bylaw 6P92).

The remaining development in South Hill includes two mobile home parks, four residential dwellings and light industrial development. One of the two mobile home parks (privately-owned) is considered non-conforming under its current land use designation of UR Urban Reserve District. Furthermore, the current site area of 4.22 hectares± (10.42 acres±) of the private mobile home park does not meet the Bylaw requirements of the R-MH District. In 1989, an application to redesignate from UR Urban Reserve District to R-MH Residential Mobile Home District was rejected by City Council. However, because of the present unstable economic conditions the existing residential dwellings and the two mobile home parks should be allowed to continue to operate, and light industrial uses be developed around them. As and when the residential uses relocate elsewhere, the land in question should be used for light industrial uses (e.g., Business park).

In view of the foregoing, the remaining South Hill area, south of the Glenmore Trail freeway and east of the realigned 24 Street S.E. should logically be included in the Southeast Industrial ASP area for long-term land use planning purposes.

(h) Lands East of the Transportation/Utility Corridor

Long-term land use planning for the lands immediately east of the Transportation/Utility Corridor should be integrated with future plans for the general area east of the current city limits (84 Street S.E.). However, on an interim basis, this area may be used for agriculture, parks/recreation and storage. Such uses must be compatible with each other and must not adversely affect other types of adjacent land uses. It should be noted that services are not available in this area.

6.13 Surface Transportation Noise Policy

City Council adopted the **Surface Transportation Noise Policy for the City of Calgary (CALTS 91)** in 1983. This policy report establishes design noise level guidelines for residential areas, suggests and evaluates alternative forms of noise attenuation, and allocates responsibility for the implementation of noise attenuation facilities between the City of Calgary and developers. Surface transportation facilities comprise both roads and railways (CNR/CP and City Light Rail Transit).

6.14 Historical Resources (Archaeological, Palaeontological and Historic Periods)

At the subdivision stage landowners/developers will be required to identify potential historical resource sites within the planning area. The information must be forwarded to the Cultural Facilities and Historical Resources Division of Alberta Community Development for their review and approval.

The landowners/developers proposing subdivision and/or development in the planning area must consult with the Cultural Facilities and Historical Resources Division and where either known historical resource sites are found, or the area is considered to have potential for the occurrence of such sites, shall comply with the **Alberta Historical Resources Act**, as required.

7.0 DEVELOPMENT CONSTRAINT AREAS (Map 16)

Development constraint areas include lands that may be developed only for certain types of uses subject to specific development setback requirements. The key constraint areas are located adjacent to the landfill and sewage lagoon sites, the floodway and the Western Co-operative Fertilizers Limited's fertilizer complex.

As shown on Map 16, certain development setbacks from the landfill and sewage lagoon sites are required in the case of residential development or other uses where food for human consumption is prepared, served, or stored. For information regarding development setback requirements refer to Section 7.4.

The City of Calgary currently owns and operates two landfill sites affecting the study area: the Shepard Landfill and the East Calgary Landfill. A third site, the Ogden Dry Waste Disposal Landfill, is no longer in operation. The East Calgary Landfill site is located directly north of the study area, but its proposed southerly expansion extends into the study area.

A private landfill site has been recently approved in the study area directly south of the Ogden Dry Waste Landfill site. Development setback requirements also apply to the private dry waste landfill site.

Southeast Industrial

Map No. 16

Title
Development Constraint Areas

Legend

- Area Structure Plan Boundary
- Noise Exposure Forecast Contour
- 28 Contour Number
- 300 metre Setback (Subdivision and Development Regulation)
- 450 metre Setback (Waste Management Regulation)
- Floodplain
- Floodway
- Landfill Site

1996 March

THE CITY OF CALGARY
PLANNING & BUILDING DEPARTMENT

7.1 Ogden Dry Waste Landfill Site

The City currently owns the Ogden Dry Waste Landfill site located in the southwest corner of Section 21-23-29 W4. Since operations began in 1960, the site has received only dry waste such as construction rubble and building material.

The landfill ceased operation in 1994. The Solid Waste Services Division and Calgary Parks & Recreation will be reviewing the possible end-uses for this site. Future uses could include the development of a regional park and may include active and/or passive recreational uses.

7.2 Shepard Sewage Lagoon and Sanitary/Class II Industrial Landfill Site

The City owns all of Section 11-23-29 W4 and the north half of Section 2-23-29 W4 within which the Shepard Landfill and Sewage Lagoon site is located.

The sewage lagoon occupies roughly the northwest quarter of Section 11-23-29 W4. Its function is to dehydrate liquified sewage sludge which is pumped in from both the Bonnybrook and Fish Creek sewage treatment plants.

The remainder of Section 11-23-29 W4 and the northwest quarter of Section 2-23-29 W4 are utilized by the City as a sanitary/class II industrial landfill site. In order to accommodate waste disposal needs in the future, it will be necessary to expand this facility. Accordingly, the northeast quarter of Section 2-23-29 W4, the northwest portion of Section 1-23-29 W4 and the western portion of Section 12-23-29 W4, are also planned for sanitary/Class II industrial landfill purposes. The City has already acquired the northeast quarter of Section 2-23-29 W4 and the westerly portion of Section 12-23-29 W4 and will seek to acquire the other lands on an opportunity basis. In view of the proposed landfill site expansion, the closure of 68 Street south of 114 Avenue S.E. would be required to facilitate consolidation of the Shepard Landfill operation.

With the closure of the Ogden Dry Waste Landfill site, dry waste is being landfilled at the Shepard site. The landfill is also licensed by Alberta Environmental Protection as a Class II industrial landfill. In 1992 City Council approved the upgrade and relocation of the industrial waste treatment/disposal facilities from the East Calgary Landfill site (located north of the study area) to the Shepard Landfill site. Plans are presently being prepared to establish the industrial treatment/disposal areas in the Shepard site. Both liquid and solid industrial wastes will be treated and disposed of at the Shepard Landfill site once the relocation is completed. The sewage lagoon will be utilized in the treatment process. The industrial waste/disposal facilities will be designed and operated so that there is no adverse impact on adjacent residential areas.

On 1995 April 24, City Council authorized the Engineering & Environmental Services Department to retain a consultant to undertake a study on developing an upgraded liquids handling system, to be relocated from the East Calgary Landfill site to the Shepard Landfill site. The study will determine costs, as well as operations and procedures, to ensure that any odour problems caused by such a system are immediately mitigated. In this regard, Alberta Environmental Protection and Calgary Health Services were contacted regarding the proposed alternative and the associated mitigative measures and they concur with the approach being taken.

Regarding the sewage lagoon and landfill sites in the study area, it is not possible to accurately predict the ultimate use of the lands involved because of the very long-term length of operation intended for these sites. A joint study by the Engineering & Environmental Services Department and Calgary Parks & Recreation to assess the appropriate end uses for the landfill site is scheduled for 1996. However, the operation and future uses should be monitored on an ongoing basis and appropriate amendments made to the area structure plan.

7.3 Private Dry Waste Landfill Site

On 1994 June 23 an application for a private dry waste landfill operation was approved by the City on land in the northwest quarter of Section 16-23-29 W4 located directly south of the now closed Ogden Dry Waste Disposal site. Because of the unknown length of operation, it is not possible to predict the ultimate use of this landfill site.

7.4 Development Setback Requirements

7.4.1 Landfill and Sewage Lagoon Sites

Land use planning in proximity to landfill sites is affected by the Subdivision and Development Regulation under the **Municipal Government Act**. In this regard, Sections 13(1) to 13(6) of the Subdivision and Development Regulation are stated below. However, reference shall be made to the Subdivision and Development Regulation current at the time a development is proposed.

"Distance from landfill, waste sites:

***13(1)** In this section,*

*(a) **disposal area** means those areas of a parcel of land that have been used and will not be used again for the placing of waste material or where waste processing or a burning activity is conducted in conjunction with a sanitary landfill, modified sanitary landfill, hazardous waste management facility or dry waste site;*

*(b) **working area** means those areas of a parcel of land that are currently being used or that still remain to be used for the placing of waste material or where waste processing or a burning activity is conducted in conjunction with a sanitary landfill, modified sanitary landfill, dry waste site, hazardous waste management facility, waste processing site, waste sorting station or waste transfer station.*

(2) Subject to subsection (5), a subdivision authority must not approve an application for subdivision for a school, hospital, food establishment or residence if the application would result in the creation of a building site for any of those uses.

(a) within 450 metres of the working area of an operating sanitary landfill, modified sanitary landfill, hazardous waste management facility or dry waste site,

(b) within 300 metres of the disposal area of an operating or non-operating sanitary landfill, modified sanitary landfill or dry waste site,

(c) within 450 metres of the disposal area of a non-operating hazardous waste management facility, or

(d) within 300 metres of the working area of an operating waste processing site, waste storage site, waste sorting station or waste transfer station.

(3) Subject to subsection (5), a development authority must not issue a development permit for a school, hospital, food establishment or residence nor may a residence be constructed if the building site

(a) is within 450 metres of the working area of an operating sanitary landfill, modified sanitary landfill, hazardous waste management facility or dry waste site,

(b) is within 300 metres of the disposal area of an operating or non-operating sanitary landfill, modified sanitary landfill or dry waste site,

(c) is within 450 metres of the disposal area of a non-operating hazardous waste management facility, or

(d) is within 300 metres of the working area of an operating waste processing site, waste storage site, waste sorting station or waste transfer station.

(4) Subject to subsection (5), a subdivision authority must not approve an application for subdivision, and a development authority must not issue a permit for the purposes of developing

(a) a sanitary landfill, modified sanitary landfill or dry waste site,

(b) a hazardous waste management facility, or

(c) a waste processing site, waste storage site, waste sorting station or waste transfer station

unless

(d) the working area of the things referred to in clause (a) is situated at least 450 metres,

(e) the disposal area of things referred to in clause (a) is situated at least 300 metres,

(f) the working or disposal area of things referred to in clause (b) is situated at least 450 metres, and

(g) the working area of things referred to in clause (c) is situated at least 300 metres

from the property line of a school, hospital, food establishment or residence or site proposed for a hospital, foot establishment or residence.

***(5)** The requirements contained in subsections (1) to (4) may be varied by a subdivision authority or a development authority with the written consent of the Deputy Minister of the Department of Environmental Protection.*

***(6)** A consent under subsection (5) may refer to applications for subdivision or development generally or to a specific application.**

7.4.2 The Floodway/Floodplain

Section 19.1 of the **Calgary Land Use Bylaw 2P80** was amended in 1985 to include Floodway and Floodplain Special Regulations (Bylaw 5P85). These regulations establish restrictions on land use and development in both the floodway and floodplain of the Bow and Elbow Rivers and Nose and West Nose Creeks. The only portion of the study area affected by the CRVP is the former Imperial Oil Refinery site south of Deerfoot Trail. Under the Land Use Bylaw definition, this land is recognized as undeveloped land,. Therefore, future development on this land must comply with the development restrictions included in the **Calgary Land Use Bylaw 2P80** [i.e., no new buildings or other new structures are allowed in the floodway, and a development setback of 60 metres (200 feet) from the edge of the Bow River is required].

7.4.3 Western Co-operative Fertilizers Limited (WCFL) Phosphogypsum Ponds

Since 1956, phosphate, for addition to fertilizer, has been manufactured in Canada from phosphate rock imported from the United States. Large tailings piles or stacks of waste gypsum, a by-product called phosphogypsum, have accumulated due to the large quantities of phosphate produced and the high ratio (about 5:1) of phosphogypsum relation to phosphate.

The current status of Western Co-operative Fertilizers Limited (WCFL) plant site activities is as follows:

- operation of the fertilizer storage and shipping facility as a bulk fertilizer distribution terminal for ammonium nitrate, urea, ammonium phosphate and potash fertilizers produced elsewhere. The operation consists of the storage, blending and shipping of the bulk fertilizers;

- operation of the ammonia storage and shipping facility and the associated rail car flaring facility. This includes the transfer of ammonia from rail cars to trucks in season;

- maintenance of the phosphate fertilizer production facilities in a mothballed condition. This includes the sulphuric acid plant, two phosphoric acid plants, the ammonium phosphate plant, the phosphate rock plant, the two phosphogypsum stacks and the utilities plant;

- the demolition and removal of the nitrogen fertilizer production facilities by late 1996. This includes the ammonia plant, the nitric acid plant, the ammonium nitrate plant, and the LP ammonia storage tank.

As shown on Map 16, there are two phosphogypsum stacks owned by WCFL. Since the phosphate production facilities have been mothballed, the two phosphogypsum stacks are not in operation. Concerns have been expressed over the possible impact of radiation emissions from the phosphogypsum stacks on adjacent residential areas. Several studies on this matter have been completed.

(a) **Observations of Radon Concentrations in the Vicinity of Western Co-operative Fertilizers Limited's Tailing Ponds** by Western Research and SENES Consultants Limited on behalf of landowners in the study area (1983 February).

(b) **An Analysis of the Major Environmental and Health Concerns of Phosphogypsum Tailings in Canada and Methods for their Reduction** by SENES Consultants Limited for the Ontario Ministry of the Environment, Alberta Environment and Environment Canada (1987 November).

The 1983 study [point (a) above] concluded that:

> *"Based on a one-year monitoring program, the Western Co-operative Fertilizers Limited's tailings ponds are not a significant source of environmental radon. Residential development in the area of the ponds should not be restricted on the basis of perceived concerns over potential hazards due to the emission of radon from the ponds."*

The 1987 study [point (b) above] states that:

1. For Operating Gypsum Tailings Ponds:

> *"The exhalation and dispersion of radon from typical operating phosphogypsum stacks was shown to be of little concern by both actual measurement of the off-stack radon concentrations in air and by atmospheric dispersion calculations. The radon concentrations in air off the stacks are indistinguishable from the background levels in the area and smaller than the variability of natural background concentrations of radon in air."*

2. For Decommissioned Gypsum Tailings Ponds:

> *"That exhalation and dispersion of radon from a decommissioned phosphogypsum stack depends upon the status of the stack. If the pond on top of the stack were allowed*

to drain after close-out, large areas of bare gypsum would then be exposed and the total inventory of radon escaping into the air above the stack would be greater than during the operational phase ...., but still within background concentrations. As a result, such concentrations are not likely to have a measurable environmental impact."

In response to these studies Alberta Environmental Protection advised that:

"The SENES report found that exhalation and dispersion of radon from a decommissioned phosphogypsum stack are unlikely to have a measurable environmental impact. The report has been subjected to a peer review by experts from the United States and Canada who did not identify any disagreement with the information provided by SENES."

As is evident from Map 2, at least a one-quarter mile separation distance remains between the phosphogypsum ponds and the adjacent residential development north, south, and west of the Deerfoot Trail S.E. corridor.

Alberta Environmental Protection also suggested that the City of Calgary ensure that an adequate buffer zone be maintained between industrial and residential land uses in order to avoid any future environmental problems. In this regard, the existing Deerfoot Trail right-of-way and possible future light industrial uses to the north and east of the Deerfoot Trail corridor will provide for such a buffer between the existing adjacent residential areas and the phosphogypsum ponds.

With respect to the foregoing, it should be noted that the two above-mentioned studies (Points "1" and "2") were conducted primarily to establish appropriate setbacks between the WCFL's phosphogypsum ponds and adjacent residential areas.

In August 1995 SENES Consultants, retained by Western Co-operative Fertilizers Limited, completed a report: **Screening Level Probabilistic Risk Assessment WCFL Calgary Site**. This report includes a risk assessment of the potential exposure to off-site individuals for three possible scenarios at the Western Co-operative Fertilizers Limited Calgary site. The scenarios considered are present conditions at the site (Scenario 1), conditions during future reclamation activities (Scenario 2), and future conditions after reclamation activities are concluded (Scenario 3). All three scenarios are based on a 450 metre setback from the phosphogypsum stacks for residential development and a 50 metre setback from the stacks for industrial/commercial uses.

"Scenario 1, representing current conditions at the site was designed using the results of recent air quality monitoring performed by WCFL (1995a). Dust was not considered for this scenario because the high moisture content of the phosphogypsum reduces wind-blown dust

from the PG stacks. Radon gas was the only modelled source of airborne radioactivity for this scenario. The second scenario, representing the conditions midway through reclamation activities included sources of dust and radon. This scenario involved drying out the PG stacks, and recontouring the stack surface, in addition to the placement of a soil cover over the dry phosphogypsum. This scenario was expected to contribute the most airborne radioactivity due to equipment and machinery working on the stack surface. The third scenario represented a post-reclamation situation where a soil cover had been put in place over the dry, recontoured PG stacks. Airborne dust from phosphogypsum was not modelled for this scenario due to the soil cover in place. Radon was therefore the only source of airborne radioactively modelled for this scenario.

It is important to note that although the scenarios which were designed to represent future conditions during reclamation activities (Scenario 2) and post-reclamation (Scenario 3) were based on the best currently available information, actual future activities may differ somewhat when the work is undertaken. Any additional reclamation beyond the placement of a soil cover such as the covering of the PG stacks with a polyethylene cap will only reduce exposures to below the already low predicted levels.

With respect to changing lands uses in the vicinity of the WCFL Calgary site, the results of this screening level probabilistic risk assessment supports past studies (e.g., Environment Canada, 1989) which have indicated that no significant off-site impacts were evident from the PG stacks. In effect, the exposure from radioactivity received by individuals living or working proximate to the PG stacks under the scenarios presented in this assessment are so low as to be almost indistinguishable from naturally occurring background levels."

In view of the foregoing, no separation distance between the Western Co-operative Fertilizers Limited's phosphogypsum stacks and adjacent industrial development is necessary. However, appropriate measures will be required to control dust particles at such time as the phosphogypsum ponds are reclaimed by Western Co-operative Fertilizers Limited.

8.0 ENVIRONMENTAL CONSIDERATIONS

8.1 Potential Soil and Groundwater Contamination

Heavy usage of fuels, solvents, and other chemicals associated with past industrial development has lead, in some areas, to the overlying soil becoming contaminated by spillage or leaking tanks. The chemicals have percolated down with rain water to reach drinking water sources. Once the solvent or fuel has reached the groundwater, vast volumes of soil and water can be affected. Therefore, the quality of groundwater needs to be monitored on a regular basis.

Extensive use is made of underground supplies for drinking water usage in areas where surface waters such as lakes and rivers are either uncommon, or used extensively by industry resulting in a decrease in water quality.

The Office for the Environment Section of the Engineering & Environmental Services Department has indicated that within the Southeast Industrial Area there are potential contaminated industrial sites. Additionally, there are abandoned oil or gas well sites and existing high pressure gas pipelines in the study area. Therefore, it is important that, where appropriate, environmental audits be undertaken by a qualified engineering/environmental consultant to actually determine the type and extent of contamination of the sites involved. The potential contaminated sites in the study area may impact future development. A detailed investigation will include the scientific analysis of actual samples of soil and water. In the event of environmental concerns, the information will be forwarded to Alberta Environmental Protection, the Engineering and Environmental Services Department, Calgary Health Services, or any other appropriate agency and will be subject to their discretion for further investigation and remediation.

In this regard, it should be noted that all costs associated with the environmental site assessments will be borne by landowners/developers, and the investigations must be completed prior to land use redesignation and development of land in the Southeast Industrial Area. Furthermore, on 1995 June 19 City Council approved a report: **Interim Policy for Site Contamination and the Land Use Redesignation and Development Permit Approval Process**. This report is available in the Planning & Building Department's Information Centre.

For further information on potentially contaminated sites, landowners/developers should consult with the Office for the Environment Section of the Engineering & Environmental Services Department.

8.2 Industrial Impact on Adjacent Residential Areas and Watercourses

Environmental considerations are an integral part of decision making in terms of planning industrial uses. In particular, the quality of water in the Western Headworks Canal should be protected through effective stormwater management (i.e., surface runoff from adjacent industrial areas should be retained in suitably located ponds and water quality tested before the water is allowed into the canal). In this regard, appropriate development setbacks should also be provided from the edge of the canal. The setback areas should be landscaped to protect and enhance the existing characteristics of the canal.

Problems related to noise, odour, heat, earthborne vibrations and high brightness light sources are controlled through performance standards included in the **Calgary Land Use Bylaw 2P80**.

By adopting the proposed **Noise Bylaw 45M95** at its meeting on 1995 July 03, City Council repealed the previous **Bylaw 9024**. Reference should be made to the **Bylaw 45M95** for more detailed information on sound levels.

Additionally, the existing **Surface Transportation Noise Policy** for the City of Calgary recommends and evaluates alternative forms of noise attenuation, and allocates responsibility for implementation of noise attenuation facilities between the City and developers, along roads, railway lines, and light rail transit. In this regard, it would be aesthetically desirable to build earth berms with certain landscaping (e.g., shrubs, trees, etc.) particularly along expressways/freeways separating residential areas from industrial development.

9.0 COMMUNITY SERVICES

9.1 Police Service

Police service is provided to most of the Southeast Industrial Area from the Police District 6 office, located at 8325 Bonaventure Drive S.E. The small portion of the study area north of 50 Avenue S.E. is served by the Police District 4 office, located at 3207 - 12 Avenue N.E.

9.2 Fire Protection and Emergency Medical Services

The entire study area is presently served by Fire Station #9, located at 2515 - 78 Avenue S.E., and Firestation #25, located at 4705 - 76 Avenue S.E.

9.3 Medical Services

The hospitals nearest to the study area are: Bow Valley Centre, located at 841 Centre Avenue E. which is under review and Rockyview General Hospital, located at 7007 -14 Street S.W. However, emergency medical services are provided by Fire Station #9, located at 2515 - 78 Avenue S.E.

9.4 Parks and Recreation Facilities

Except for the Calgary Soccer Centre (private organization) and the regional pathway along the W.H. Canal, there are no public open spaces to facilitate active and/or passive recreational activities within the study area.

Appropriately located public open spaces are needed within the study area. It is noted that City Council has approved the former Imperial Oil Refinery site for a future park for active and passive recreational uses. The Ogden Dry Waste Landfill site, when reclaimed, would also be a suitable location for a regional park. Additional public open spaces can be achieved through consolidation of municipal reserve land resulting from subdivision of lands included in the study area.

Furthermore, appropriately located pathways/ bikeways are needed to facilitate pedestrian and bicycle access between the study area and the adjacent residential communities, including the Bow River valley open space to the west.

Calgary Parks & Recreation is seeking to assemble a land base sufficient to support a major multi-athletic park. Both Glenmore and Deerfoot Trails S.E. offer good vehicular access and thus reduces travel time to this facility. Locating athletic parks within light industrial areas eliminates operational conflicts with adjacent residential development.